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MEDICINE SHOW BY ROBERT MOORE WILLIAMS

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MEDICINE SHOW

By ROBERT MOORE WILLIAMS

The medicine show was a bit different—and one doctor saw that. But it took a true medicine man—a man whose work was healing people—to see that.

IN the night, riding in an old model truck, two men came into the town of Centerville. They set up a tent on a vacant lot. Then they waited, quietly and patiently, for what was to happen.

Young Dr. Harmon, called out of bed early in the morning by the news that old lady Washam was dying and would he get out there quick and take care of her again, saw the tent as he drove down the main street of town. He also saw the signs.

FREE SHOW TONIGHT

A second sign, in smaller letters, said:

TRY

Father Mark's

Magic Remedy

CURES EVERY HUMAN ILL

Dr. Harmon's first thought was one of vague annoyance—the tent was on the vacant lot directly across the street from his office, where his patients would see it. His second thought was one of annoyance also, expressed as a wish.

"If those fellows in the medicine shows could only do what they claim, this would be a wonderful world!"

At the thought of such a world, with sickness at a minimum, a warm glow came into existence inside the young physician. Although he was not well regarded by some of his colleagues because his views did not at all times correspond to theirs, he was a doctor who took very seriously the Oath of Hippocrates.

His one aim in life was to help a sick man get well.

Harmon did not much care how this result was achieved. Considering the complexity of the human organism and the number of variables involved, he was never quite certain that he or anyone else ever really knew how this result was

achieved. He used medicine where medicine would do the job, soothing words where they would help, and he would probably have used witchcraft if he had understood it.

The result was that he got all the chronic cases that nobody else wanted to try to cure, and all the hypochondriacs who could not afford the fees charged by Dr. Lapham, the town's biggest physician. Harmon also got via his back door all the sick puppies, the pet turtles that had begun to think that swimming with the belly up was all that was left in life for them. The kids who brought their sick pets loved him and he loved them. Sick people loved him. When he came into a room, it was as if he brought with him something more potent than any medicine. Even old lady Washam, who hadn't said a kind word to or about a doctor in years, admitted that young Dr. Harmon maybe "wasn't as bad as the rest of them."

However, even if his patients liked him, he had one grievous failing in the eyes of some of his colleagues—a poor memory. Although he had never been known to forget a technical matter such as a complicated blood count, or the details of a prescription he had written, he simply could not remember to send a bill to a patient who could not afford to pay it. This got him some criticism. "But what if they can't pay?" he protested once to Dr. Lapham.

"Then sue 'em!" Lapham had snorted. "They'll find the money somewhere when you slap a suit on them."

When he reached his patient, Dr. Harmon found exactly what he knew he would find, that she was not dying yet. About sixty-five, she lay in a littered bed in a littered room in a small house just outside the edge of town. An anxious



middle-aged son tried to stay out of the doctor's way. The patient was in pain and was complaining.

"We'll have to do something for that pain," Dr. Harmon said.

He took her blood pressure because she expected it, felt of the lumpy mass that was part of her stomach, gave her a mild sedative from his kit, and told her a joke. When he left, her spirits were up.

His were down. He knew that she was dying slowly of cancer and that the condition was inoperable.

In his office that day, Dr. Harmon and his busy nurse saw a succession of patients. He set a broken arm, prescribed for a rash on a baby and reassured the frantic mother, and told burly Jason Kemper, who hadn't worked a day in years but who complained that something was wrong with his stomach, to "cut down the whiskey to just a pint a day, as a starter." Kemper left in a huff.

Working out his back door, Harmon mended the tail of a puppy named Bowser who had made a mistake in judging how fast and hard a screen door could close. He also mopped up the puppy's owner, Donna Culver, aged six, and stuffed her with candy, giving two pieces to the puppy, "because he needs something in his stomach to help him forget about his tail."

As he went about his routine, he was vaguely aware that the tent on the vacant lot was attracting a number of curious onlookers. It was his intention, later in the day, to go over and meet these peddlers. His secret opinion, which he never dared voice in public, was that some of the so-called quack remedies sometimes had curative qualities that modern medicine could well investigate and possibly use to advantage. His grandmother had her home remedies, and she had not been a fool.

Late in the afternoon, the phone rang. Harmon answered it himself.

"Dr. Harmon?" a woman asked.

"Speaking."

"This is Dr. Lapham's secretary. Will you hold on for a moment, please? Dr. Lapham will speak to you."

Harmon's lips formed a line but he held on. Lapham was a long time coming. Then he was shouting into the phone, his voice a bustle of impatient importance.

"Harmon, what's going on across the street from you?"

"I don't know. I haven't been over there."

"Well, I'll tell you what it is—it's a medicine show. I drove past there a few minutes ago and there is no question about it. They've even got signs up advertising some quack remedy."

"Is that so? As I said, I haven't been over to see what is going on."

"Well, get over there, Harmon, and report back to me. I'm not going to have any medicine shows operating in this community, spreading their poisonous nostrums among my patients, as long as I'm president of the medical society."

"We don't know they're poisonous," Harmon murmured.

"What? We can take that for granted, I think. Get over there and tell them to leave. Tell them I'm giving them twenty-four hours to get out of town."

"Why don't you tell them? You're president of the local society. If this medicine show needs investigation or action, it's your job to take care of it."

"What? Too busy, too busy, got an emergency case coming up, can't possibly make it. Also, I'm too well known. If I try to look in on them, they'll recognize me and I won't get a thing. But you're not so well known—"

"O.K., I'll look in on them as soon as I can find time," Harmon said, pain in his voice.

"Make time, Harmon, that's what I do. As soon as you report back to me, I'll call the sheriff." The phone clicked in Harmon's ear as Lapham hung up.

Evening had arrived before Harmon got away from his office. Walking across the street to the vacant lot, he saw that

a makeshift stage had been erected. A speaker was on the stage and a crowd had already gathered. The spieler was tall, skinny, and hook-nosed. Words poured from him like water from a hose.

"... I want to tell you tonight about Father Mark's remedy. However, ladies and gentlemen, I want to warn you in advance, there will be scoffers among you, there will be doubters, there will be people who do not, perhaps cannot, believe what I am going to say. I want to tell you that these people are justified in their attitude. I know from my own unfortunate experience that there are charlatans, frauds, and quacks among us, and that the honest citizen unfortunately is forced to make important and vital medical decisions on the basis of inadequate information, on what some friend tells him, on what he has read in a book or in a newspaper, even on what the almanac tells him. The result is that sometimes we fall into the hands of blood-suckers whose only aim is to cheat us out of our money—"

Listening, Harmon was impressed. The selling technique was excellent, the delivery was powerful, and the man was telling the truth—so far.

"Ladies and gentlemen, I want to make one fact crystal clear—if there is one thing we are not after, it is your money!"

The words produced a stir. Harmon wondered what Dr. Lapham would say if this statement were reported to him.

The speaker paused. Harmon moved forward. The speaker glanced at him, glanced away, then pulled his eyes back to the young doctor.

"Hi, Doc," the speaker said, smiling.

"How did you know me?"

"I caught a glimpse of you in your office this afternoon, sir, and noted the name on your shingle. Go right on back into the main tent, Dr. Harmon. My colleague there will answer any and all questions you care to ask. With your medical knowledge, you will be able to ask many questions that these good people, not learned in the art of Hippocrates, do not know how to ask. Go right on into the tent, sir."

The speaker smiled and nodded. He had a compelling, magnetic quality about

him. Without quite realizing why he did it, Dr. Harmon found himself moving past the platform and through the pulled-back tent flap that served as the front entrance to this medicine show.

A man wearing tinted, thick-lensed spectacles was sitting in a chair placed in front of a thick panel that formed part of a table. A second chair was beside the table. The eyes behind the glasses were indistinct but Harmon had the impression they resembled those of some wary, alert bird. The man's skin was sallow, his head was bald. He rose as Harmon entered.

"Ah, yes—" The voice was a hiss that accented all of the sibilants in a way that was somehow pleasing to the ear. "Ah, yes. You are a doc-tor, sir? Will you sit down, please?" He motioned to the chair beside the table.

As Harmon sat down, the man's hands darted over the control panel, adjusting switches. Harmon sneezed, an old hay fever symptom that had hung on for years. He glanced around the tent for the substance that was producing the allergic reaction, saw nothing that would account for it, blew his nose. In front of the table, the man scanned the meter readings with alert interest, then turned his attention to Harmon.

"Permit me to introduce myself, sir. My name is Yanvro. I have a degree, sir, but since it was not conferred by an institution of learning of your great country, you may not recognize it. It corresponds very roughly to your own honored title of M.D."

"A privilege to meet you," Harmon said. He gave his name. The man's hand-clasp was warm and friendly and at the same time somehow alien and distant. "What school conferred your degree, Dr. Yanvro?"

This would be one of the questions Lapham would ask. When it was answered, Lapham would snort, "Never heard of it!"

"The University of Telinka," Yanvro answered, smiling.

"Never—" Harmon caught himself. "I don't recall that school. Where is it located?"

The question went unanswered. A hum

came from the thick panel, a small light glowed on the front.

"Ah, yes," Yanvro said. From a receptacle in the side of the panel, he took two small pieces of metal. Turning to Harmon, his manner became subtly professional as if Harmon had somehow become the patient calling on his personal physician for medical advice and Yanvro had become the doctor. "I noticed when you came in, sir, that you had a slight rhinitis, hay fever is perhaps what you call it—"

"How did you know that? I showed none of the signs of rhinitis and I didn't sneeze until after I had sat down."

"Perhaps it was a lucky guess. But wasn't my guess correct? You do have hay fever, do you not?"

"Yes, a touch of it occasionally. I have never got around to identifying the substances to which I am sensitive. But—"

"If you will carry these in your pockets—not both in the same pocket but each in a separate pocket—I think you will find that within a day or two something very interesting is happening to your hay fever, sir." Yanvro handed Harmon two small pieces of metal.

Harmon took them. So far as he could see, they were simply flat pieces of metal.

"One in the right pocket, one in the left," Yanvro said. "I could give you a very detailed description of the metals and the way they are magnetized. While you were sitting in the chair, this equipment made a complete diagnosis of you. This is not a diagnosis as you understand and use the term, sir, your blood pressure was not taken, no blood count was made, and there was no manual probing for symptoms. These things, while useful to a young medical science"—Yanvro's voice became mildly apologetic—"have been superseded by more accurate methods of measurement. This equipment counted, measured, and analyzed the very complex electrical currents flowing within your body and the electromagnetic fields generated by these currents. Then, on the basis of these measurements, this machine magnetized the pieces of metal in such a way that the aberrant, displaced current flows within your body—of which your

hay fever is one manifestation—will come back to normal.”

The description rolled from Yanvro's tongue as if he had memorized it.

“But—”

“Try them, Dr. Harmon, before you reach a decision. I know what I am telling you seems impossible to you. I suggest a test before conclusion is reached. Ah, yes, Madam—” Yanvro was bowing to a woman who was coming through the opening of the tent. “Would you please excuse me, Dr. Harmon?”

His manner was deft. He was in this instant a professional man asking a courtesy from another member of the same profession, sure in advance that it would be granted. “I have another patient.”

“Certainly.” Harmon reacted instantly. He went out the side door of the tent.

The woman who entered as he left was old lady Washam.

As he returned to his office, Harmon felt that his head was spinning mildly. Both the spieler and Yanvro could certainly talk. If words could cure, they would be expert doctors. As to the two pieces of metal, he would examine them at his leisure.

Father Mark's Magic Remedy—two pieces of magnetized metal! How Lap-ham would love that!

The phone was ringing as he entered his office. Answering it, he thrust the two pieces of metal into his pocket, and promptly forgot all about them.

The owner of Bowser, the puppy with the broken tail, had fallen and broken her arm.

“She fell off her bicycle, doctor. Will you come at once? She's in awful pain.” The mother was on the verge of hysteria.

“I'll be right there.”

It was a compound fracture and the splintered fragments of broken bone had penetrated the skin. The child was screaming with pain and was refusing to be touched. Looking at her, Harmon wished fervidly for the facilities of a large hospital but none were available in Centerville or anywhere near. Taking off his coat, Dr. Harmon rolled up his sleeves.

An eternity passed before the splintered fragments were back in place.

After that came penicillin.

“If an infection doesn't develop, she will be all right in a couple of weeks,” he told the parents. “I'll come back and see her tomorrow afternoon. Take her temperature regularly and call me if anything unusual comes up.”

As he left the house, he sneezed. He thought, absently, that his hay fever was getting worse. He made two more calls that night, reaching home well after midnight, utterly worn out, and sneezing even more violently than usual.

When he awakened in the morning, his hay fever was gone. As he pulled on his clothes, he realized its absence was only temporary, and sneezed suddenly.

At the office, he found only two patients waiting. He had finished prescribing for the second one, his nose continuing to run, when a knock came on the back door. He opened it. Yanvro stood there, a polite inquiring smile on his face.

“I came over to ask about your hay fever, Dr. Harmon.”

Kachool! Reaching for tissues, Harmon glared at the man. “You and your—”

Whaaaaang! sounded the telephone. Harmon answered it.

Silas Washam, the middle-aged son of old lady Washam, begged, “Doc, you got to come out here right away. Doc, you got to hurry. Doc—”

“What's wrong with your mother now?”

“She's crazy, Doc! She's plumb out of her mind.”

Harmon restrained the impulse to tell Silas Washam to leave diagnosis to someone capable of making it. “What's she doing?”

“She's insistin' that there ain't a thing wrong with her, that she's been cured, and that she's gonna put out the wash today. Doc, I can't do a thing with her. Doc—”

“I'll be there right way,” Harmon said. He glanced at Yanvro, still waiting at the back door. “I'll see you later,” he said.

Yanvro's nod was polite, the quick smile came to his face. But under the smile was concern.

Silas Washam was waiting for him out

by the main road, with additional information. "Doc, she says she is gonna chop up some wood after she finishes with the wash—"

Inside the house, he found his patient in the kitchen, just finishing breakfast. From the remnants on the table, he judged that she had eaten at least two stacks of hot cakes, ham and eggs, and had drunk he couldn't guess how much coffee.

"Oh, there you are, Doc," she greeted him. "Seems to me like I raised nothing but durned fool kids. That durned Silas gawkin' there behind you thinks I'm loony. He thinks I ain't able to put out the wash. For fifty years, ever since I was a girl—until I got sick—I put out a wash every week. I ain't aiming to change my habits now."

"Do you think you are able to do this?"

"Doc, don't talk like that idiot son of mine! Of course I'm able to do it. I wouldn't be saying I was able if I wasn't."

"Yesterday, you know, you weren't feeling so well."

"That was yestiddy. Yestiddy I was sick. Today is different. Today I'm a well woman."

She spoke with sureness and conviction. Was this the conviction of lunacy or did she know what she was talking about?

"Would you mind if I . . . ah . . . examined you before you put out that wash?"

"If it'll keep you and that idiot son of mine quiet, I'll let you do it."

A few minutes later a bewildered doctor put down his stethoscope. The heart action was strong, there were no wheezes in the lungs. The pulpy mass that had been apparent in the stomach the day before was still present but it was diminished in size and it had softened as if it was dissolving, going away. "What . . . ah . . . happened?" he asked.

"I went to the medicine show last night. I was certain you and the rest of your tribe wasn't going to get me well. If I was going to get well, I had to hunt me up another doctor." In her voice was the triumph of getting well, not triumph over

Dr. Harmon. "I saw that doctor at the medicine show. He gave me something."

"Would you mind telling me what it was?"

"Heck, I'll show you." From her apron pockets she took two small pieces of metal. They were not the same shape as the ones Yanvro had given Harmon and they had obviously come from the same machine.

"The doc gave 'em to me. He told me to keep 'em in my apron pockets, and if I wasn't wearing an apron, to sew 'em on to my underwear. The way I am feeling this morning, you can bet I'm going to do exactly what he said."

Silently, too dazed to speak, Dr. Harmon left the house. Outside he faced the worried son.

"Let her do the wash," he said.

"Doc, you don't mean—"

"You help her."

"But—"

"And after she finishes with the wash, if she still wants to do it, let her chop wood."

Harmon headed for his car on the run.

On the vacant lot, a line of people were waiting to be admitted to the tent. Each carried a package or a container of some kind. One was on crutches, another hobbled with the aid of a cane, a third limped.

Dr. Harmon had seen such sights before, he saw them almost every day in his own office. Some of these people were his former patients that he had tried to help without much success. Now they were lined up in front of a medicine show tent, each one still hoping to find a way to be well again. If they found fraud in that tent, much promised but little delivered, what would their reaction be? Harmon knew his own people well enough to know how they would react to deceit.

But what if the activities carried on inside the tent were, by some miracle, a part of the spectrum of truth? What if—*Kachoo!* Harmon's sneeze rang a warning bell inside him.

As Harmon stopped his car, he saw that two other cars were stopping on the side street adjoining the vacant lot. Dr. Lapham, his pince-nez on crooked and

his bedside manner showing signs of fraying at the edges, was getting out of one car. The sheriff, a gun holstered at his hip and a star prominent on his shirt front, was getting out of the other.

"Oh oh," Harmon thought. He went rapidly past the line of people waiting for admission to the tent. They greeted him and he saw what they were carrying. One had a pail full of peach seeds, the second had a box of walnuts, the third had hickory nuts. Another was carrying packages of seeds, nasturtiums, pansies, hollyhocks, violets, peas, beets, radishes, and lettuces.

Harmon went in the side flap of the tent. Yanvro, with every evidence of pleasure and satisfaction was accepting a box of—hazel nuts!—from a caller. The tall spieler was sitting in a chair in the back of the tent, quietly smoking a cigar.

The tent was partly filled with boxes and pails of nuts, seeds of every kind and description.

"I'm sorry to interrupt," Harmon said. "But I want to talk to you—*kachool*!"

"Of course, Dr. Harmon." Yanvro quickly shooed his caller out. "I'm sorry about your hay fever. Did you—"

"Never mind the hay fever. It can wait. A patient of mine was in this tent last night. I examined her yesterday morning. She had an advanced and inoperable case of cancer—"

"Go right on in, Sheriff," Dr. Lapham's angry voice came from outside. "Go right on in and do your duty."

The star and the round moon face of the sheriff came through the tent opening. Lapham, fuming, came right behind him. His eyes swept the tent. "You were supposed to report to me Harmon. No! No excuses, no alibis, but it's a good thing we've got one physician in this city who is capable of taking intelligent action. What is that junk?" A wave of his hand indicated the big panel with its meters and its switches.

"That is our diagnostic and treatment equipment," Yanvro said quietly.

"Diagnostic and treatment equipment, bah! Magic gimcracks to deceive fools. And what's this?" Lapham kicked at a basket of walnuts.

"We do not accept fees, sir," Yanvro said. Harmon, listening, understood what the tall spieler had meant the night before when he said they were not after their listener's money. They accepted seeds as fees. But why seeds?"

"If anyone feels that we have helped him, we will accept a free-will offering of seeds—" Yanvro continued.

"Seeds?" Lapham exploded. "Do you mean to tell me that you accept peach pits and hickory nuts as fees?"

From the tone of Lapham's voice Harmon got the impression that the physician might have respected what was being done here if Yanvro had charged twenty dollars per office call.

"Yes," Yanvro answered. "The payment, the fees, if you wish to call them that, are purely voluntary, however. We ask no man to pay—"

"Voluntary!" Lapham's voice rose as if the thought itself were horrifying.

"I know it's a shame, Dr. Lapham," Harmon spoke impulsively. "It would be much better to sue them when they can't or won't pay."

Lapham's attention came back to the young doctor. "What are you doing here, Harmon?"

"Trying to discover something."

"Hah! In a medicine show tent! Well, if you're going to find out anything from these charlatans, you will have to do it while they're in jail. Sheriff, I want these two men arrested, for practicing medicine without a license—"

"Wait a minute," the tall spieler spoke quickly. At a gesture from Yanvro, he was quickly silent.

"Gents—" the sheriff began.

"Do you have a warrant?" Harmon spoke.

"Huh? A warrant?"

"He doesn't need a warrant to arrest these malefactors!" Lapham said, angrily. "They have been detected in the act of committing a crime. Harmon, you keep out of this."

"It's a shame you haven't been detected in some of the criminal acts you have committed behind the protection of the name of medicine!" Harmon said,

heatedly. He turned to the sheriff. "Do you have a warrant, officer?"

"Well, no—"

"Then it would be best to get one, I think, before you act."

"Harmon, I told you to stay out of this. You're interfering with the process of justice."

"On the contrary, I am making certain that the process of justice is carried out. The law prescribes a warrant before an arrest. *Kachoo!* As the situation stands now, you have no evidence that these men have broken any law or committed any crime. If you want them arrested, get a warrant. Isn't that right, Sheriff?"

"'Fraid you're about right, Doc," the sheriff admitted. "But Doc Lapham made me come—"

"Then we'll get a warrant!" Lapham snapped. "That won't be any problem. I know the magistrate personally. We'll get a warrant all right."

"Do that. And when these men have been arrested in the manner prescribed by law, I will consider it a privilege to sign bail bonds for them!" The young doctor spoke with growing heat.

"You'll what? You'll bail these frauds out of jail?" Lapham was goggle-eyed at the thought.

"You heard me. Now get going. I have something I wish to discuss with Dr. Yanvro."

"But—"

"Get out!" Harmon's voice had power in it. The outraged physician and the confused sheriff left the tent.

The eyes Yanvro turned toward Harmon held appreciative awe. "Well done, Dr. Harmon."

"Thank you. As I was saying—*kachoo!*"

"Your hay fever, sir!"

"Forget my hay fever."

"But give me just a moment, sir. Just one question."

"All right," Harmon said. "But make it fast. I've got more important things to talk about than my hay fever or me."

A shy, approving smile appeared on Yanvro's face. "The fact that you think more about your patients than you do about yourself is making you a great

doctor, sir. Your patients know you put their interests first, they respond by getting well for you—"

"Sometimes they don't get well for me and I have to sign a death certificate. I don't like that. Get to your point."

"But you must also consider yourself, sir." If this was a reproof, it was very gentle. "Now as to those pieces of metal which I gave you last night—"

"Got 'em in my pocket. They didn't work for me." Harmon pulled them out.

"Did you put *both* of them in the same pocket?" Yanvro said.

"What difference does that make? Actually, I forgot them completely."

"It makes a very great difference, sir. If both are carried together in the same pocket, they reinforce the disease currents instead of cancelling them. Will you put them in different pockets, sir, and see what happens to your hay fever?" Yanvro's eyes pleaded with Harmon to obey.

To oblige the man, and to get on to more important matters, Harmon slid the little pieces of metal into different pockets. "Now about this patient of mine, I don't know whether my original diagnosis was wrong, or her cure is an example of spontaneous remission—"

"She is getting better?" Yanvro asked.

"Better? *She's getting well!*"

"Then what are you complaining about, sir?"

"I'm complaining because I am not certain your magnetized pieces of metal account for her improvement. If they do account for it, I am complaining because I don't know how they work. Man, this is the greatest thing in the history of medicine, if you can make it work. I want to know—Yes?"

Harmon's nurse, white-faced and out of breath, came through the entrance of the tent.

"Dr. Harmon, Mrs. Culver just called. Donna's temperature is 105."

Automatic reaction patterns instilled so deeply in him that he had forgotten their existence, patterns which said the sick patient came first and everything else came second, instantly made Harmon's decision for him. Heading for the tent opening, he paused just long enough to

say over his shoulder to Yanvro, "I'll see you later."

The child was delirious. The father and mother hovered in the background as Harmon sat down beside the bed. Bowser crouched in the corner and wet himself and whimpered as if he sensed the presence of something here in this room that frightened him down to the bottom of his puppy soul. For thirty minutes, Dr. Harmon sat beside the bed, while the mother and father slowly went frantic.

"What is it, Doctor? What is it?"

"Some infection I do not understand."

"What can we do?"

"I gave her penicillin. Apparently this organism is penicillin-resistant. I can try some other antibiotic but if penicillin does not even check the infection, I am afraid we have run into something that no antibiotic will stop."

"Doctor—"

"If you believe in prayer, now is the time to pray."

The mother went silently from the room.

In the corner, the puppy whimpered. On the bed, the little girl moaned and twisted. She was not in contact with this world but with some other world in which strange shapes came and went like ghosts across a wasteland. In this other world were sights that frightened her. Harmon shook his head.

Suddenly he realized that he had not sneezed since he left the medicine show tent.

At the realization, something inside of him came unhinged. For an instant—and it was an instant of pure madness—panic such as he had never known blew through him with hurricane force. He caught the panic, righted it, and knew what he wanted to do. It blew up again, with more than hurricane violence, as he considered the possible consequences to him of doing what he wanted to do.

"I don't care what happens to me he said.

The panic, for this time at least, subsided.

He lifted the child in his arms.

Donna's parents went with him. Getting out of his car in front of his office,

Harmon carried the child across the street toward the tent of the medicine show.

Many people were on the lot now. There was a stir and a flurry among them. Coming out of the tent was a procession of four men, Dr. Lapham, Yanvro, the spieler, and the sheriff. On the sheriff's hip, the gun was clearly visible. Yanvro and the spieler were in handcuffs.

The child in his arms, Harmon walked up to Dr. Lapham.

"Get out of my way, you young fool. These men have been arrested. The warrant, I assure you, is legal."

"I have a sick child here," Harmon said.

"So I see." Lapham's eyes widened. "Harmon, you don't mean that you were bringing her to a medicine show for these charlatans to treat?"

"I mean exactly that," Harmon answered. He was ice and iron inside, with no panic anywhere. The sheriff moved forward and looked at the child in Harmon's arms with bewildered concern, then looked at her parents.

"Sam, what's wrong with Donna?" the sheriff said.

"Some kind of an infection," the father answered.

"Bad?"

"Yes. Very bad."

The crowd on the lot formed a circle around them.

"It's a good thing I'm here," Lapham said. "Harmon, if you had let these charlatans treat this child while she was under your care, I would have been forced to ask for a cancellation of your license to practice medicine."

Harmon turned to Donna's father. "Hold her, will you?" The twisting child went into her father's arms.

"My license to practice medicine is hanging on the wall of my office," Harmon said. "If I let this child die without doing everything in my power to save her life, I'll tear up my license myself, Dr. Lapham."

Something like a gust of wind moved through the listening crowd. Yanvro's watching face was suddenly alive with light.

"Release this man," Harmon said. He pointed to Yanvro.

"But—" the sheriff said.

"Release him."

"He will be released when the court turns him loose, which will be about ten years from now," Lapham said. "As to bail for them, I am going to see that it is set higher than any figure you can reach."

"Time is very important. This infection is at the crisis point. I want Yanvro to see what he can do to help the child. I admit I do not know what to do."

"You're out of your mind," Lapham said, coldly. "Stand aside."

"I see," Harmon said. He did not move. "This is Donna Culver," he said to the sheriff.

"I know it is," the sheriff answered. "I didn't even know she was sick until now."

"She's your niece, isn't she?"

"Yes."

"Well, you know now that she is sick. And there is something else I want you to know." Harmon moved forward to whisper in the sheriff's ear.

"Without more help than I can give, she is going to die. If you will take orders from me for just a little while, she may have a chance to live."

"W-w-what?"

"Stop that whispering!" Lapham snapped.

"This is your alibi for what is going to happen," Harmon whispered to the sheriff. As the officer leaned forward to listen, Harmon slipped the pistol from its holster on the sheriff's hip.

"Unlock the handcuffs on these two men."

Staring at the gun, the sheriff turned the key in the cuffs.

"Harmon, you have gone completely crazy!" Lapham said. "You haven't heard the end of this, I promise you." The outraged physician stalked from the lot.

"Carry her into the tent," Harmon said, to Donna's father.

The crowd surged behind them. At the entrance Harmon paused. "If you folk will be both quiet and patient, I will appreciate it."

"Hurry up, Doc," Jason Kemper shouted from the crowd. "There're others waiting."

Changes had been made inside the tent.

The truck had been backed into the far end and the boxes of seeds had been loaded into it.

"Set her in this chair beside the table," Yanvro said to the father.

"Is this all right, Doc?" Culver spoke to Harmon.

"We're gambling. The way she is going now, there is nothing I can do for her. We're taking a chance that something can be done—here." Harmon's voice was suddenly choked and taut.

"I'll back your gamble, Doc," the father spoke, his voice tense. "I'll bet my last dollar on one thing—your heart's in the right place."

"Thank you."

"When one's heart is in the right place, all other things may be possible," Yanvro said softly. Behind his thick-lensed spectacles, his eyes seemed to glow with dancing lights.

The needles on the dials jumped wildly as the child was placed in the chair. Watching, Harmon saw color go out of Yanvro's face. Yanvro darted a quick glance at the twisting child. More color drained from his face. He turned mutely appealing eyes to Harmon as if begging not to be judged too quickly or too harshly, that some things were beyond human power to control.

"You've got to save her," Harmon said. His voice was a prayer.

"My friend, we will do the best we can, but it may be that what you call a miracle is needed here. I have never seen such readings on these meters—"

"Then work a miracle!" Harmon said firmly.

"We will do our best. Pienster—"

"Yes." The spieler was instantly beside Yanvro.

Harmon watched the two men work as he had never seen two men work before. Yanvro and Pienster made a team. What one thought, the other seemed to act out. They moved, acted, and thought, in such perfect rapport and understanding that they were, in effect, one man, one mind. The panel hummed softly, the light glowed. Pienster snatched the pieces of metal from the receptacle. Using pieces of cloth torn from her nightgown, he

clamped them into position on the child's body. The first two pieces of metal went on the broken arm, around the spot where the infection had its source. Yanvro watched the meters, changed the switches. The second two pieces of magnetized metal—Father Mark's Remedy—went on the child's head, one down at the base of the skull, the other on her forehead. Always they used two pieces of metal, like the two poles of a magnet. Did these pieces of metal set up a magnetic flux in the child's body and did this flux in turn change the course and intensity of the infection?

The meters changed. Yanvro watched, Pienster acted. As they watched and moved and worked, they spoke rapidly to each other. Harmon hardly realized they were speaking in a tongue he did not know.

The language they used was unimportant, its meaning was universal.

The sounds in the tent were the soft weeping of a woman, the harsh, mumbled prayers of the father, the voice of a child moaning that she was in a land that was full of fear and would somebody take her by the hand and lead her home? The quick, alert voices of the two men were overtones against the hum of the panel. Outside voices shouted in argument. Harmon did not hear them. His eyes were on the child and now and again he glanced at Yanvro.

Yanvro seemed to have stopped breathing. On the panel, a meter reading was changing, changing, changing. Harmon did not know whether it was going in the right direction or the wrong direction. He did not know which was the right way for the meter to go. Yanvro knew but Yanvro was holding his breath. Pienster was holding his breath too, now, his eyes glued on the meters. The tent was silent.

Again the panel hummed. Another pair of pieces of metal came from it. Pienster tied them into place, on both sides of the chest, as if he was trying to strengthen the beating of a tiny heart already working beyond the limits of its load.

There was no sound anywhere.

The meter shifted, began a slow retracing of its course.

Then there was sound.

A small voice said, "Mommy?"

The word was said plaintively, a single chirp of sound, like the voice of a young bird in the nest.

The mother moved to gather the child in her arms.

Yanvro held up his hand. The mother stopped moving.

"Mommy? Mommy?" The voice came again, stronger now.

"All right," Yanvro said.

The mother lifted the child. "Yes, dear. Yes, darling."

"Mommy, where am I? Where is daddy? Where is Bowser?"

"Daddy is right here, honey. We left Bowser at home."

"Mommy, who are these two funny-looking men?"

"Friends, darling."

"They're nice men, Mommy." There was delight and happiness in the voice. Then the voice changed.

"Mommy, I'm hungry."

"Yes, dear, I know. You will have something to eat very soon."

Harmon wiped the sweat from his forehead and breathed again. He did not need to see Yanvro nodding happily to himself to know that the miracle had been accomplished.

"Mommy, Mommy, I'm hungry."

The mother looked at Harmon. Harmon said softly, "Take her home and feed her. And give Bowser something too, so he will also feel good in his stomach."

In front of the panel, Yanvro nodded happily again as if including Bowser was the one final thing that was needed to make this child well again.

Carrying the child, the parents left the tent.

Harmon, clearing his throat, looked at Yanvro. "There's something I want to ask you."

"What about your hay fever, sir?"

"Gone. It's gone. It went away." For a moment, Harmon marveled about that. Then his old self asserted itself. "What I want to know is . . . hey—"

From the entrance to the tent, Pienster, looking out, spoke, "*Se floton throm!*"

"What?" Harmon said. "I didn't understand."

As if they had not heard him, or had forgotten all about him, the two men moved. Each taking an end of the table that held the panel, they lifted it into the backend of the truck.

"Hey! Wait!"

They set the table beside the boxes and sacks that contained the seeds. Pienster remained in the truck. Yanvro dropped back to the ground. Harmon seized the man by the shoulder.

"I've got to know—"

That was as far as he got. A new voice was suddenly exploding in the tent, a rough voice, loud and unruly, a demanding, arrogant voice, the voice of a man who would not take any answer except his answer.

"You've got to do something."

Jason Kemper stood there. It was Jason Kemper who had shouted at Harmon as they carried Donna into the tent. Kemper had a gun in his hand.

Harmon looked hastily for the weapon he had taken from the sheriff, then remembered he had given it back.

"You've got to do something for me, too!" Kemper shouted.

The man had the constitution of a horse. The only thing that was wrong with Kemper was his refusal to work.

"You can cure yourself," Harmon said. "There are people in this world who cannot help themselves. They come first, before you."

"I don't want any arguments out of you, Doc!" Kemper flared. "You can keep your big mouth shut. If these guys can cure old lady Washam's cancer, and can cure a kid that nobody else thought had a chance to live, they can do a lot of other things, too."

"As Dr. Harmon has suggested, you can cure yourself. However, we might make it possible for you to work better." In that single statement made on the spur of the moment, Harmon recognized a shrewd and competent diagnostician.

"Work!" Kemper spat. "Who said anything about working? That's for fools! What I want is for you to make me so smart I can get rich without working!"

The gun centered on Yanvro.

"And no arguments!" Kemper said.

Phut!

The soft sound came from somewhere up above. Glancing around, Harmon caught a glimpse of Pienster, in the truck, hastily putting something back into his pocket.

Kemper dropped the gun he was holding. A glazed look appeared in his eyes. Very gently he sat down. Then, as if the effort of sitting erect was too difficult for him, he laid down.

"Somebody was sure to think that he could use our skill and our knowledge to make himself rich without working," Yanvro said, apologetically, to Harmon.

"But—"

"As for him, he will be all right in a few hours."

"I don't care if he lies there until he rots!" Harmon said. "I want to know about you. I want to know about Father Mark's Remedy."

"We bought this truck and tent from a man who was using that name for the product he was selling," Yanvro said. "*Father Mark's Remedy* was as good as any other name, so we retained it. If you will get into the truck—"

"Huh?" Harmon had the impression that this was happening too fast for him. "Why should I get into the truck?"

"Perhaps because we are leaving. Perhaps because I ask it," Yanvro said. "Perhaps because outside this tent there is a milling throng that will become a mob in another few minutes."

"A mob?"

"They will burst through this tent like water through a broken dam. They will demand everything, from treatment for hives to potions to make some woman love them. But they will never take into consideration what part they are playing in giving themselves hives, nor will they think to ask whether or not the woman wants to love them. Failing in that, they will fail in everything. If you will get in, please, I will explain while Pienster drives."

Harmon got into the truck. As Pienster, at the wheel, exploded it out of one side of the tent, the mob flowed in the other side.

"You see?" Yanvro said, gently.

"I see," Harmon said. Sadness was in his voice.

He took a wild ride in the back of the truck, with hickory nuts, walnuts, and brightly-colored packets of vegetable seeds bouncing all round him. Pienster either had no knowledge of speed laws or no respect for them. In the back end, Yanvro tried to explain. "It is a matter of seeing the human organism in many ways. Of seeing it as muscle and bone and blood plasma."

"I know that," Harmon protested.

"It is also a matter of seeing how all these parts fit together and how the whole determines the function of the parts—"

"Hold on. That wasn't what I was taught in school."

"It may be possible that some of the things you were taught were not in accordance with the evidence," Yanvro said. His eyes twinkled gently behind the thick-lensed, tinted spectacles. "It is also a matter of seeing the human organism as an electrical system, with minute but exceedingly important currents being generated in every bit of tissue, even in every cell, and how these currents blend together and flow through the organism and form the whole."

"I—"

"To see all of this as we see it is not easy, my friend," Yanvro said. His voice was very gentle.

"I'll try."

"Good. In turn, I will try to explain."

Harmon listened. He knew he was grasping and retaining very little of what was said, that Yanvro was explaining what could only be demonstrated. "The tools, the concepts with which to think, you do not as yet have them, my friend," Yanvro said, over and over again.

"I'm trying to get them," Harmon said sadly.

The truck came to a halt. Harmon looked wildly around. Pienster had brought them into the hills, into wooded high country where the road stopped. He had halted the truck beside a thick grove of trees. Hidden in the grove was something that startled Harmon as he had never been startled before.

Harmon whispered. "You—"

"Yes," Yanvro said. He took off the tinted, thick-lensed spectacles. What was behind them was clearly revealed.

The eyes that looked out from the face were not human eyes.

For some time thereafter all three of them were very busy carrying boxes of seeds and the panel from the back of the truck. Harmon protested every step of the way. He did not succeed in making himself heard until they had finished with the carrying.

"But you don't *have* to leave!" He had said the words over and over before Yanvro answered.

"You and your kind would make us welcome," Yanvro said. "We know that. But Dr. Lapham—"

"I'll kill him," Harmon said. Lapham was now interfering with the best dream he had ever known.

"What would be the gain if you destroyed him? There are millions like him. Another Dr. Lapham would take his place. If you destroyed that one, there would be another one. Then there would be others like the burly man, like Kemper, and the seekers of love potions, and—"

"I know," Harmon said.

"Why don't you humans grow up as a race?" Yanvro said. "We cannot understand at all your failure to mature as a race. There is so much waiting for you, when you grow up." His nonhuman eyes lifted to the sky as if somewhere in those vast depths was some world about which he knew.

"I guess we will, in time, but it seems a slow process."

"Do not be sad, my friend. We—"

"But I still can't understand the seeds," Harmon interrupted. "If you wanted them, why didn't you just take them?"

"Such an act would have been a breach in our sense of justice. We never take unless we give something of value in return. We had to give something for the seeds, our own laws require it. We gave health."

"But why nuts?"

Yanvro smiled. "In spots, the plains of my world are barren. Our native growth is failing. We need new life from another planet, new seeds. In what we

have gotten from your world will be some plant that will grow, for us. Then, when you reach us, it may be that you will find peach trees blooming in a different soil."

A glow appeared on Yanvro's face. "We will be waiting for you, for all men, when you come to us, as come you will, in time."

"Will we?" Something of the glow on Yanvro's face was appearing in Harmon's heart.

"You will, you will," Yanvro answered. "It is in the stars. And in the meantime, my friend, when I or any of my people come your way again, you will be one on whom we will call."

The glow in Harmon's heart burst into life. "Will I?"

"You will," Yanvro said, smiling.

A few minutes later, from the grove of trees, something went with a rush into the sky. Harmon waved and watched it vanish. Quietly he returned to the truck, drove back to town.

Across the street from his office, the tent was in tatters and shreds of torn canvas upon the ground, mute evidence of the fury that had been vented there.

Entering his office, he found Dr. Lapham and two other doctors whom he recognized as the disciplinary committee of the medical society. They rose. Lapham spoke.

"Harmon, I am bringing charges of malpractice against you, of using unproved and untested remedies, of meeting with charlatans and quacks, of risking the life of a patient, this child, Donna Culver. I am going to take action to have your license canceled."

From the wall, the license looked down at Harmon. "Just one moment." He went to the phone, called a number.

"She's wonderful, Dr. Harmon," Mrs. Culver's happy voice came over the phone. "She's eating, she doesn't have a temperature, she's—"

In the background, Harmon could hear childish shouts of glee, the laughing voice of a six-year-old girl, the excited yapping of a puppy. Very gently, he replaced the phone, turned to the three men.

With all the strength that he possessed, he hit Dr. Lapham in the nose, a smashing, blood-letting, crashing blow. Harmon felt the blow tingle through his whole body. Everywhere he felt it, it felt good. He turned to the other two doctors.

"Gentlemen, I'm ready to answer your charges."

"Well struck, Harmon," the nearest one said, holding out his hand. "You saved me the job of doing it."

Harmon, staring, took the hand that was offered to him, saw that the other doctor was also holding out his hand, he took it. His eyes found the license on the wall. In that moment, the license seemed to fade away and he seemed to look into the glass and through it—into a burst of pink color, the seeds of transplanted Earth trees blooming on what had once been barren land.

Then the frame again held his license to practice medicine.

When the doctors had gone, Harmon went into his back office. He sat down and put his feet on his desk.

Exultation was in him, such exultation as he had never known. In time, strange visitors would knock on his back door in the dark of the night, to confer and slip silently away before the dawn. In time, riotous blooming of peach trees on another world. In time, healing—on Earth.

THE END

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MISSION OF GRAVITY

By HAL CLEMENT

SECOND OF FOUR PARTS. Magellan was a piker beside this tiny adventurer—exploring a giant world with a savage gravity seven hundred times Earth's!

SYNOPSIS

For the first time in history, the scientists of Earth and the planets of nearby stars have acquired the opportunity to make studies of a really intense gravitational field. The solitary planet of the brighter component of the binary star 61 Cygni has a mass some five thousand times that of Earth, but because it consists largely of degenerate matter has a volume not much larger than that of Uranus. Ordinarily this would mean a surface gravity of about three hundred times that of Earth, and for several similar worlds this has been the case; but the 61 Cygni planet has such an enormously rapid rotation rate that, while its effective equatorial gravity is only three times that of Earth, the extreme flattening gives it over six hundred G's at the poles.

Recognizing the opportunity, the governments of several planets pool resources and construct a special research rocket which will be capable of landing in those polar regions without destruction, and load it with as much varied apparatus as their scientists can devise. Under remote control, the rocket lands at the south pole of the giant planet, presumably secures its data—but fails to respond to the take-off signal. Some of the data was telemetered, but some is on records that must be physically recovered; and no known living creature can survive in the gravity of the polar regions.

However, a station is built at the equator to do what can be done; and Charles Lackland, while conducting xenological investigations near the dome, encounters Barlennan, a native of the world, which he calls Mesklin.

Barlennan is the captain and owner of a tramp ship, half trader and, Lackland suspects, half pirate, exploring the almost unknown equatorial zone of the

world. He has beached his ship, the Bree, near the station for the season; Mesklin is approaching periastron, which is also the northern hemisphere's midsummer, and the boiling of the cap of frozen methane which has built up around the northern pole during the preceding four Earth-years creates tremendous storms which render the seas impassable. Lackland and Barlennan form a friendship, partly because each sees a chance of obtaining what he wants from the other and partly because of natural sympathy. The Mesklinite, over a period of several weeks, learns a great deal of Lackland's language, and a tentative agreement is reached whereby Barlennan is to make the thirty-thousand-mile voyage to the south pole, find the grounded rocket, and transmit its information by a specially designed radio-television unit which the scientists of the expedition devise to withstand Mesklin's cold, pressure, and gravity—it is a solid block of material, using only printed circuits, transistors, and similar non-living parts. In return the expedition is to furnish weather predictions for Barlennan until he returns to his own country, thus enabling him to carry safely a far larger cargo.

The trip cannot be started until the beginning of spring in the southern hemisphere, and in the interval it is discovered through the examination of photographs made from space that the downed rocket is very awkwardly located—an overland journey of several thousand miles will be needed for the Bree's crew to reach it. Another body of "water" also reaches the south polar regions, and a river feeding it passes within a few miles of their goal; but no navigable passage to this second sea can be found on the photographs. However, an incident which occurs when Lackland and Barlennan are exploring some miles from the station gives the

latter an idea. The tank in which they were riding is crippled, and the Earthman's cumbersome armor makes it impossible for him to reach the dome in the triple gravity; but the crew of the Bree is able to tow him back on a sled made of metal from the wrecked tank. Barlennan now suggests that a similar sled be made for his ship, and towed to the other ocean by another tank.

This proves feasible, as the ocean extends into the low-gravity regions of the equator where Lackland can survive to operate the tank. The route is laid out with the aid of more aerial photographs, the sled constructed at the main expedition base on Toorey, Mesklin's inner moon, and ferried to the equatorial station. As winter draws to a close, the Bree is loaded aboard—the ship is only forty feet in length, and easily carried by her crew in their present near-weightless environment—and the trip starts.

Barlennan, through a misunderstanding of Lackland's, has already had an experience which has jarred out of him the ingrained, conditioned fear of height characteristic of all natives of his part of the planet—a fear amply justified by the savage gravitation under which they live, which makes a fall of even half their eighteen-inch body length almost certainly fatal. The very idea of a fall is strange to them; in their land, an object released at a height simply disappears, to reappear almost simultaneously on the ground below in a well flattened state.

PART 2.

CHAPTER VII.

UP to this time, most of the hills had been gentle, smooth slopes, their irregularities long since worn off by weather. There had been no sign of the holes and crevasses which Lackland somewhat feared before starting. The hilltops had been smoothly rounded, so that even had their speed been much higher the crossing of one would hardly have been noticed. Now, however, as they topped such an acclivity and the landscape ahead came into view a difference caught every eye at once.

It was longer than most they had crossed, more a ridge across their path than a mound; but the great difference was in the top. Instead of the smooth, windworn curve presented by its fellows, it seemed at first glance actually jagged; a closer look showed that it was crowned with a row of boulders spaced with regularity that could only mean intelligent arrangement. The rocks ranged from monstrous things as big as Lackland's tank down to fragments of basketball size; and all, while rough in detail, were generally spherical in shape. Lackland brought his vehicle to an instant halt and seized his glasses—he was in partial armor, but was not wearing the helmet. Barlennan, forgetting the presence of his crew, made a leap over the twenty yards separating the *Bree* from the tank and settled firmly on top of the latter. A radio had been fastened there for his convenience long before, and he was talking almost before he had landed.

"What is it, Charles? Is that a city, such as you were telling me about on your own world? It doesn't look very much like your pictures."

"I was hoping yo ucould tell me," was the answer. "It certainly is not a city, and the stones are too far apart for the most part to be any sort of wall or fort that I could imagine. Can you see anything moving around them? I can't with these glasses, but I don't know how keen your eyesight is."

"I can just see that the hilltop is irregular; if the things on top are loose stones, I'll have to take your word for it until we're closer. Certainly I can see nothing moving. Anything my size would be impossible to see at that distance anyway, I should think."

"I could see you at that range without these glasses, but I couldn't count your eyes or arms. With them I can say pretty certainly that that hilltop is deserted. Just the same, I'll practically guarantee that those stones didn't get there by accident; we'd better keep our eyes open for whoever set them up. Better warn your crew." Lackland mentally noted the fact of Barlennan's poorer eyesight; he was not physicist enough to have predicted it from the size of the native's eyes. The

only way they could have matched Lackland's in resolving power would be to use shorter wave lengths of light—and even the brighter component of 61 Cygni radiates less ultraviolet than does Sol. The fainter sun of the pair is too distant from Mesklin at its closest to help much, and is even redder than its companion.

For two or three minutes, while the sun moved far enough to reveal most of the areas previously in shadow, they waited and watched; but nothing except the shadows moved, and finally Lackland started the tank once more. The sun set while they were descending the slope. The tank had only one searchlight, which Lackland kept aiming at the ground in his path; so they could not see what went on among the stones above.

Sunrise found them just crossing another brook, and tension mounted as they headed uphill once more. For a minute or two nothing was visible, as the sun was directly ahead of the travelers; then it rose far enough to permit clear forward vision. None of the eyes fastened on the hilltop could detect any change from its appearance of the night before. There was a vague impression, which Lackland found was shared by the Mesklinites, that there were now more stones; but since no one had attempted to make a count of them before, this could not be proved. There was still no visible motion.

It took five or six minutes to climb the hill at the tank's five-mile speed so the sun was definitely behind them when they reached the top. Lackland found that several of the gaps between the larger stones were wide enough for the tank and sled, and he angled toward one of these as he approached the crest of the ridge. He crunched over some of the smaller boulders, and for a moment Dondragmer, on the ship behind, thought one of them must have damaged the tank; for the machine came to an abrupt halt before the sled was far enough up for its occupants to see into the next valley. Barlennan could be seen still on top of the vehicle, all his eyes fixed on the scene below him; the Flyer was not visible, of course, but after a moment the *Bree's* mate decided that he, too, must be so

interested in the valley beyond as to have forgotten about driving.

"Captain! What is it?" Dondragmer hurled the question even as he gestured the weapons crew to the flame tanks. The rest of the crew distributed themselves along the outer rafts, clubs, knives, and spears in readiness, without orders. For a long moment Barlennan gave no answer, and the mate was on the point of ordering a party overboard to cover the tank—he knew nothing of the nature of the jury-rigged quick-firer at Lackland's disposal—when his captain turned, and gave a reassuring gesture.

"It's all right, I guess," he said. "We can see no one moving, but it looks a little like a town. Just a moment and the Flyer will pull you forward so that you can see without going overboard." He shifted back to English and made this request to Lackland, who promptly complied. This action produced an abrupt change in the situation.

What Lackland had seen at first—and Barlennan, less clearly—was a broad, shallow bowl-like valley entirely surrounded by hills of the type they were on. There should, Lackland felt, have been a lake at the bottom; there was no visible means of escape for rain or melted snow. Then he noticed that there was no snow on the inner slopes of the hills; their topography was bare. And strange topography it was.

It could not possibly have been natural. Starting a short distance below the ridges were broad, shallow channels. They were remarkably regular in arrangement; a cross section of the hills taken just below where they started would have suggested a very pretty series of ocean waves. As the channels led on downhill toward the center of the valley they grew narrower and deeper, as though designed to lead rain water toward a central reservoir. Unfortunately for this hypothesis, they did not even all reach it, though all got as far as the relatively level, small floor of the valley.

More interesting than the channels themselves were the elevations separating them. These, naturally, also grew more pronounced as the channels grew deeper; on the upper half of the slopes they were smoothly rounded ridges, but as the eye

followed them down their sides grew steeper until they attained a perpendicular junction with the channel floors. A few of these little walls extended almost to the center of the valley, but they cut off with startling abruptness before actually reaching it. They did not all point toward the same spot; there were gentle curves in their courses that gave them the appearance of the flanges of a centrifugal pump rather than the spokes of a wheel. Their tops were too narrow for a man to walk on; even one of Barlennan's people would have had difficulty in maintaining footing on what looked from this distance almost like a sharp edge, from which the sides sloped away at better than a forty-five degree angle and grew even steeper as they descended until they merged with the perpendicular lower walls.

Lackland judged that channels and separating walls alike were some fifteen or twenty feet wide where they broke off. The walls themselves, therefore, were quite thick enough to be lived in, especially for Mesklinites; and the existence of numerous openings scattered over their lower surfaces lent strength to the idea that they actually were dwellings. The glasses showed that those openings not directly at the bottom of the walls had ramps leading up to them; and before he saw a single living thing, Lackland was sure he was examining a city. Apparently the inhabitants lived in the separating walls, and had developed the entire structure in order to dispose of rain. Why they did not live on the outer slopes of the hills, was a question that did not occur to him.

He had reached this point in his thoughts when Barlennan asked him to pull the *Bree* over the brow of the hill before the sun made good seeing impossible. The moment the tank began to move, a score of dark figures appeared in the openings that he had suspected were doorways; no details were visible at that distance, but the objects, whatever they were, were living creatures. Lackland heroically refrained from stopping the tank and snatching up the glasses once more until he had pulled the *Bree* into a good viewing position.

As it turned out, there was no need

for him to have hurried. The things remained motionless, apparently watching the newcomers, while the towing maneuver was completed; he was able to spend the remaining minutes before sunset in a careful examination of the beings. Even with the glasses some details were indistinguishable—for one reason, they seemed not to have emerged entirely from their dwellings; but what could be seen suggested strongly that they belonged to the same race as Barlennan's people. The bodies were long and caterpillarlike; several eyes—they were hard to count at that distance—were on the foremost body segment, and limbs very similar to, if not identical with, Barlennan's pincer-equipped arms were in evidence, though once again it was difficult to tell just how many were possessed by each individual. The coloration was a mixture of red and black, as in the *Bree's* complement.

Barlennan could not see all this, but Lackland relayed the description to him tensely until the city below faded from sight in the dusk. When he stopped talking the captain issued a boiled-down version in his own language to the tensely waiting crew. When that was done:

"Have you ever heard of people living this close to the Rim, Barl? Would they be at all likely to be known to you, or even speak the same language?"

"I doubt it very much. My people become very uncomfortable, as you know, north of what you once called the 'hundred-G line.' I know several languages, but I can't see any likelihood of finding one of them spoken here."

"Then what shall we do? Sneak around this town, or go through it on the chance its people are not belligerent? I'd like to see it more closely, I admit, but we have an important job to do and I don't want to risk its chances of success. You at least know your race better. How do you think they'll react to us?"

"There's no one rule, there. They may be frightened out of their wits at your tank, or my riding on it—though they might not have normal instincts about height, here at the Rim. We've met lots of strange people in our wanderings, and sometimes we've been able to trade and sometimes we've had to fight. In general,

I'd say if we kept weapons out of sight and trade goods in evidence, they would at least investigate before getting violent. I'd like to go down—they might well have stuff worth trading, and this town is not a hopeless distance overland from our own sea if we want to come here later. Will the sled fit through the bottom of those channels, do you think?"

Lackland paused. "I hadn't thought of that," he admitted after a moment. "I'd want to measure them more carefully first. Maybe it would be best if the tank went down alone first, with you and anyone else who cared for the ride traveling on top. That way we might look more peaceful, too—they must have seen the weapons your men were carrying, and if we leave them behind—"

"They didn't see any weapons unless their eyes are a great deal better than ours," pointed out Barlennan. "However, I agree that we'd better go down first and measure—or better yet, tow the ship around the valley first and go down afterward as a side trip; I see no need to risk her in those narrow channels."

"That's a thought. Yes, I guess it would be the best idea, at that. Will you tell your crew what we've decided, and if any want to come down afterwards?"

Barlennan agreed, and returned to the *Bree* for the purpose—he could speak in a lower tone there, although he did not feel that there was any real danger of being overheard and understood.

The crew in general accepted the advisability of taking the ship around rather than through the city, but from that point on there was a little difficulty. All of them wanted to see the town, but none would even consider riding on the tank, often as they had seen their captain do so without harm. A habit that amounts to a fixed conditioning is extremely hard to break. Dondragmer broke the deadlock by suggesting that the crew, except for those left to guard the *Bree*, follow the tank into the town; there was no need to ride, since all could now keep up with the speed the vehicle had been using up to this time.

The few minutes this discussion consumed brought the sun once more above the horizon; and at Barlennan's signal the

Earthman swung the tank ninety degrees and started around the rim of the valley just below its coping of boulders. He had taken a look at the city before starting, and saw no sign of life; but as the tank and its tow swung into motion heads appeared once more at the small doors—many more of them, this time. Lackland was able to concentrate on his driving, sure now that their owners would still be there when he was free to examine them more closely. He attended to his job for the few days required to get the sled around to the far side of the valley; then the tow cable was cast off, and the nose of the tank pointed downhill.

Practically no steering was required; the vehicle tended to follow the course of the first channel it met, and went by itself toward the space which Lackland had come to regard—wholly without justification—as the market place of the town. Approximately half of the *Bree's* crew followed; the rest, under the second mate, remained as guards on the ship. Barlennan, as usual, rode on the tank's roof, with most of the small remaining supply of trade goods piled behind him—most of his crew by now were willing to throw things, they wouldn't climb or jump.

The rising sun was behind them as they approached from this side of the valley, so the seeing was good. There was much to see; some of the town's inhabitants emerged entirely from their dwellings as the strangers approached. Neither Lackland nor Barlennan attached any significance to the fact that all who did this were on the far side of the open space; those closer to the approaching travelers remained well under cover. They supposed, if they thought of the matter consciously at all, that it was only because the more distant individuals felt safer.

As the distance narrowed, one fact became evident; the creatures were not, in spite of initial appearances, of the same race as Barlennan. Similar they were, indeed; body shape, proportions, number of eyes and limbs—all matched; but the city dwellers were over three times the length of the travelers from the far south. Five feet in length they stretched over the stone floors of the channels, with body breadth and thick-

ness to match. Lackland hoped that their muscular strength would only match the gravity where they lived, but realized that this was unlikely—no creature so feeble could compete against its neighbors from points a little farther from the equator.

Some of the things had reared the front third of their long bodies high into the air, in an evident effort to see better as the tank approached—an act that separated them from Barlennan's people as effectively as their size. These swayed a trifle from side to side as they watched, somewhat like the snakes Lackland had seen in museums on Earth. Except for this barely perceptible motion they did not stir as the strange metal monster crawled steadily down the channel it had chosen, almost disappeared as the walls which formed the homes of the city dwellers rose gradually to its roof on either side, and finally nosed its way out into the open central space of the town through what had become an alley barely wide enough for its bulk. If they spoke, it was too quietly for either Lackland or Barlennan to hear; even the gestures of pincer-bearing arms that took the place of so much verbal conversation with the Mesklinites Lackland knew was missing. The creatures simply waited and watched.

The silence continued for a minute or two after the tank came to a halt. Perhaps the natives were readjusting their eyesight after their encounter with the tank's searchlight; the last half of the descent had been made at night.

The sailors edged around the tank through the narrow space left—Lackland had just barely completed emerging from the alley—and stared almost as silently as the natives. Dwellings, to them, consisted of three-inch-high walls with fabric roofs for weather protection; the idea of a covering of solid material was utterly strange to them. If they had not been seeing with their own eyes the giant city dwellers actually inside the weird structures, Barlennan's men would have taken the latter for some natural formation.

Lackland simply sat at his controls, looked, and speculated. This was a waste of time, really, since he did not have enough data for constructive imagination; but he had the sort of mind that could not

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remain completely idle. He looked about the city and tried to picture the regular life of its inhabitants, until Barlennan's actions attracted his attention.

The captain did not believe in wasting time; he was going to trade with these people, and, if they wouldn't trade, he would move on. His action, which focused Lackland's attention on him, was to start tossing the packaged trade goods from the roof beside him, and calling to his men to get busy. This they did, once the packages had stopped falling. Barlennan himself leaped to the ground after the last bundle—an act which did not seem to bother in the least the silently watching giants—and joined in the task of preparing the goods for display. The Earthman watched with interest.

There were bolts of what looked like cloth of various colors, bundles that might have been dried roots or pieces of rope, tiny covered jars and larger empty ones—a good, varied display of objects whose purpose, he could only guess.

With the unveiling of this material the natives began to crowd forward; whether in curiosity or menace Lackland could not tell. None of the sailors showed visible apprehension—he had come to have some ability at recognizing this emotion in their kind. By the time their preparations seemed to be complete an almost solid ring of natives surrounded the tank. The way it had come was the only direction unblocked by their long bodies. The silence among the strange beings persisted, and was beginning to bother Lackland; but Barlennan was either indifferent to it or able to conceal his feelings. He picked an individual out of the crowd,

using no particular method of choice that the Earthman could see, and began his selling program.

How he went about it Lackland was utterly unable to understand. The captain had said he did not expect these people to understand his language, yet he spoke; his gestures were meaningless to Lackland, though he used them freely. How any understanding could be transmitted was a complete mystery to the alien watcher; yet apparently Barlennan was having some degree of success. The trouble was, of course, that Lackland in his few months' acquaintance with the strange creatures had not gained more than the thinnest bit of insight into their psychology. He can hardly be blamed; professionals years later were still being puzzled by it. So much of the Mesklinite action and gesticulation is tied in directly with the physical functioning of their bodies that its meaning, seen by another member of the same race, is automatically clear; these giant city-dwellers, though not of Barlennan's precise species, were similar enough in makeup so that communication was not the problem Lackland naturally assumed it would be.

In a fairly short time, a number of the creatures were emerging from their homes with various articles which they apparently wished to trade, and other members of the *Bree's* crew took active part in the bargaining. This continued as the sun swept across the sky, and through the period of darkness—Barlennan asked Lackland to furnish illumination from the tank. If the artificial light bothered or surprised the giants at all, even Barlennan was unable to detect any signs of the fact. They paid perfect attention to the business at hand, and when one had gotten rid of what he had or acquired what he seemed to want, he would retire to his home and leave room for another. The natural result was that a few days later all of Barlennan's remaining trade goods had changed hands, and the new articles transferred to the roof of the tank.

Most of these things were as strange to Lackland as the original trade materials had been; but two attracted his attention particularly. Both were apparently living animals, though he could not make out

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their details too well because of their small size. Both appeared to be domesticated; each stayed crouched at the side of the sailor who had purchased it, and evinced no desire to move away. Lackland guessed—correctly, as it turned out—that these were creatures of the sort the sailors had been hoping to raise in order to test possible plant foods.

"Is that all the trading you're going to do?" he called, as the last of the local inhabitants drifted away from the neighborhood of the tank.

"It's all we can do," replied Barlennan. "We have nothing more to trade. Have you any suggestions, or do you want to continue our journey now?"

"I'd like very much to find out what the interiors of those houses are like; but I couldn't possibly get through the doors, even if I could discard my armor. Would you or any of your people be willing to try to get a look inside?"

Barlennan was a trifle hesitant. "I'm not sure whether it would be wise. These people traded peacefully enough, but there's something about them that bothers me, though I can't exactly put a nipper on it. Maybe it's because they didn't argue enough over prices."

"You mean you don't trust them—you think they'll try to get back what they've given, now you're out of trade goods?"

"I wouldn't say precisely that; as I said, I don't have actual reason for my feeling. I'll put it this way; if the tank gets back to the valley rim and hooked up to the ship so that we're all ready to go, and we've had no trouble from these things in the meantime, I'll come back down and take that look myself."

Neither Barlennan nor Lackland had paid any attention to the natives during this conversation; but for the first time, the city dwellers did not share this indifference. The nearer giants turned and eyed, with every indication of curiosity, the small box from which Lackland's voice was coming. As the talk went on, more and more of them drew near and listened; the spectacle of someone talking to a box too small to contain any intelligent creature they knew seemed, for the first time, to break down a wall of reserve that not even the tank had been able

to affect. As Lackland's final agreement to Barlennan's suggestion came booming from the tiny speaker, and it became evident that the conversation was over, several of the listeners disappeared hastily into their homes and emerged almost at once with more objects. These they presented, with gestures which the sailors now understood quite well. The giants wanted the radio, and were willing to pay handsomely for it.

Barlennan's refusal seemed to puzzle them. Each in turn offered a higher price than his predecessor. At last, Barlennan made an ultimate refusal in the only way he could; he tossed the set onto the roof of the tank, leaped after it, and ordered his men to begin throwing the newly acquired property up to him. For several seconds the giants seemed nonplussed; then, as though by signal, they turned away and disappeared into their narrow doorways.

Barlennan felt more uneasy than ever, and kept watch on as many portals as his eyes could cover while he stowed the newly bought goods; but it was not from the dwellings that the danger came. It was the great Hars who saw it, as he half reared himself over his fellows in imitation of the natives to toss a particularly bulky package up to his captain. His eye chanced to rove back up the channel they had descended; and as it did so he gave one of the incredibly loud hoots which never failed to amaze—and startle—Lackland. He followed the shriek with a burst of speech which meant nothing to the Earthman; but Barlennan understood, looked, and said enough in English to get the important part across.

"Charles! Look back uphill! *Move!*"

Lackland looked, and in the instant of looking understood completely the reason for the weird layout of the city. One of the giant boulders, fully half the size of the tank, had become dislodged from its position on the valley rim. It had been located just above the wide mouth of the channel down which the tank had come; the slowly rising walls were guiding it squarely along the path the vehicle had followed. It was still half a mile away and far above; but its downward speed was building up each instant as its tons of

mass yielded to the tug of a gravity three times as strong as that of the earth!

CHAPTER VIII.

FLESH and blood have their limits as far as speed is concerned, but Lackland came very close to setting new ones. He did not stop to solve any differential equations which would tell him the rock's time of arrival; he threw power into the motors, turned the tank ninety degrees in a distance that threatened to twist off one of its treads, and got out from the mouth of the channel which was guiding the huge projectile toward him only then did he really come to appreciate the architecture of the city. The channels did not come straight in to the open space, as he had noticed; instead, they were so arranged that at least two could guide a rock across any portion of the plaza. His action was sufficient to dodge the first, but it had been foreseen; and more rocks were already on their way.

For a moment he looked around in all directions, in a futile search for a position which was not about to be traversed by one of the terrible projectiles; then he deliberately swung the nose of the tank into one of the channels and started uphill. There was a boulder descending this one, too; a boulder which to Barlennan seemed the biggest of the lot—and to be growing bigger each second. The Mesklinite gathered himself for a leap, wondering if the Flyer had lost his senses; then a roar that outdid anything his own vocal apparatus could produce sounded beside him. If his nervous system had reacted like that of most Earthly animals, he would have landed halfway up the hill. The startle reaction of his race, however, was to freeze motionless, so for the next few seconds it would have taken heavy machinery to get him off the tank roof. Four hundred yards away, fifty yards ahead of the plunging rock, a section of the channel erupted into flame and dust—the fuses on Lackland's shells were sensitive enough to react instantly even to such grazing impact.

An instant later the rock hurtled into the dust cloud, and the quick-firer roared again, this time emitting half a dozen

barks that blended almost indistinguishably with each other. A fair half of the boulder emerged from the dust cloud, no longer even roughly spherical. The energy of the shells had stopped it almost completely; friction took care of the rest long before it reached the tank. It now had too many flat and concave surfaces.

There were other boulders in position to roll down this channel, but they did not come. Apparently the giants were able to analyze a new situation with fair speed, and realized that this method was not going to destroy the tank. Lackland had no means of knowing what else they might do, but the most obvious possibility was a direct personal attack. They could certainly, or almost certainly, get to the top of the tank as easily as Barlennan and repossess everything they had sold as well as the radio; it was hard to see how the sailors were to stop them. He put this thought to Barlennan.

"They may try that, indeed," was the answer. "However, if they try to climb up we can strike down at them; if they jump we have our clubs, and I do not see how anyone can dodge a blow while sailing through the air."

"But how can you hold off alone an attack from several directions at once?"

"I am not alone." Once again came the pincer gesture that was the Mesklinite equivalent of a smile.

Lackland could only see the roof of his tank by sticking his head up into a tiny, transparent view dome, and he could not do this with the helmet of his armor on. Consequently he had not seen the results of the brief "battle" as they applied to the sailors who had accompanied him into the city.

These unfortunates had been faced with a situation as shocking as had their captain when he first found himself on the roof on the tank. They had seen objects—heavy objects—actually *falling* on them, while they themselves were trapped in an area surrounded by vertical walls which were guiding the fearful missiles inexorably toward them. To climb was unthinkable, though the sucker-feet which served them so well in Mesklin's hurricanes would have served as adequately in this task; to jump as they

had now seen their captain do several times was almost as bad—perhaps worse. It was not, however, physically impossible; and when minds fail, bodies are apt to take over.

Every sailor but two jumped; one of the two exceptions climbed—rapidly and well—up the wall of a “house.” The other was Hars, who had first seen the danger. Perhaps his superior physical strength made him slower than the others to panic; perhaps he had more than normal horror of height. Whatever the reason, he was still on the ground when a rock the size of a basketball passed over the spot he was occupying.

For practical purposes, it might as well be considered to have struck an equivalent volume of live rubber; the protective “shell” of the Mesklinites was of a material chemically and physically analogous to the chitin of Earthly insects, and had a toughness and elasticity commensurate with the general qualities of Mesklinite life. The rock bounded twenty-five feet into the air against three gravities, hurtling entirely over the wall which would normally have brought it to a stop, struck at an angle the wall of the channel on the other side, rebounded, and went clattering from wall to wall up the new channel until its energy was expended. By the time it had returned, in more leisurely fashion, to the open space the main action was over; Hars was the only sailor still in the plaza. The rest had brought some degree of control into their originally frantic jumps and had either already reached the top of the tank beside their captain or were rapidly getting there; even the climber had changed his method to the more rapid leaping.

Hars, unbelievably tough as he was by Terrestrial standards, could not take the sort of punishment he had just received completely without injury. He did not have his breath knocked out, since he lacked lungs—the small size of the natives combined with the physical properties of hydrogen to make diffusion a perfectly adequate method of getting the gas to the tissues that needed it—but he was scraped, bruised, and dazed by the impact. Fully a minute passed before he could control his motions sufficiently to

make a co-ordinated attempt to follow the tank; why he was not attacked during that minute neither Lackland, Barlennan, nor Hars himself was ever able to explain.

The Earthman thought that the fact that he was able to move at all after such a blow had frightened any such thoughts out of the minds of the city dwellers; Barlennan, with a more accurate idea of Mesklinite physique, thought that they were more interested in stealing than in killing and simply saw no advantage in attacking the lone sailor. Whatever the reason, Hars was permitted to regain his senses in his own time, and eventually, to regain the company of his fellows. Lackland, finally brought up to date on just what had happened, waited for him; when he finally reached the vehicle two of the crew had to descend and practically throw him to the roof, where the rest promptly undertook first-aid measures.

With all his passengers safely aboard, some of them crowded so close to the edge of the roof that their new-found indifference to height was a trifle strained, Lackland headed up hill once more. He had warned the sailors to keep clear of the gun muzzle, and kept the weapon trained ahead of him; but there was no motion on the ridge, and no more rocks fell. Apparently the natives who had launched them had retreated to the tunnels which evidently led up from their city. This, however, was no assurance that they would not come out again; and everyone on and in the tank kept a sharp lookout for any sort of motion.

The channel they were climbing was not the same as the one they had descended, and consequently did not lead directly to the sled; but the *Bree* became visible some distance before they reached the top, owing to the tank's height. The crew members who had been left behind were still there, all looking with evident anxiety down into the city. Dondragmer muttered something in his own language concerning the stupidity of not keeping an all-around watch, which Barlennan repeated in amplified form in English. Lackland was not enough of an artilleryist to control the muzzle velocity of his projectiles, and in any case would have hesitated to play with any but the flattest

of trajectories under this gravity, or he would have been tempted to lob a shell to the other side of the slope to attract their attention.

However, the worry proved fruitless; the tank reached the stranded sled, turned, and was hitched up to its load without further interference. Lackland, once more under way, decided that the giants had over-estimated the effectiveness of the gun; an attack from close quarters—emerging, for example, from the concealed tunnel mouths which must shelter the individuals who started the rocks downhill—would leave the weapon completely helpless, since neither high explosive nor thermite shells could be used close to the *Bree* or her crew. Lackland had no hand weapons with him, and in any case would have been more than reluctant to emerge from the tank to use them. The giants were, presumably, fully as strong as Barlennan's people, and he had seen the latter do things to metal that had seriously undermined his trust in personal armor.

There was no point, however, in worrying over what might have happened. He could, of course, use such thought as the basis for plans to insure that nothing of the sort did happen later; and with great reluctance he decided that there could be no more exploration until the *Bree* had reached the waters of the eastern ocean. Barlennan, when this conclusion was offered for his consideration, agreed, though he made some reservations in his own mind. Certainly while the *Flyer* slept his own crew was going to keep working. They now had two *ternees* which could be used to check new plants for edibility, and Barlennan was shrewd enough to realize that he might create a market for a new foodstuff strictly on the basis of its rarity, even though it had no particular virtue as regarded taste. Lackland had already remarked that the Mesklinites were similar in many ways to his own people, though he had not mentioned caviar to the captain.

With the expedition once more under way and the tangible results of the interruption rapidly being transferred from tank roof to ship by leaping Mesklinites, Lackland made a call to Toorey, listened

humbly to the expected blast when Rosten learned what he had been doing, and silenced him as before with the report that much plant tissue was now available if Rosten would send down for it.

By the time the rocket had landed far enough ahead of them to preserve the Mesklinite nervous systems, had waited for their arrival, picked up the new specimens—to which Barlennan had generously added a large number of the eggs they no longer wanted to hatch—and waited once more until the tank had traveled safely out of range of its take-off blast, many more days had passed. These, except for the rocket's visit, were relatively uneventful. Every few miles a boulder-rimmed hilltop was sighted, but they carefully avoided these, and none of the giant natives were seen outside their cities. This fact rather worried Lackland, where or how they obtained food.

With nothing but the relatively boring job of driving to occupy his mind, he naturally formed many hypotheses about the strange creatures. These he occasionally outlined to Barlennan, but that worthy was of little help in deciding among them. It was not that he was completely uninterested, since he did have some share of normal curiosity; but his mind was of the sort which could not deal with problematical matters when there were practical ones immediately at hand. He had such problems, or felt that he had, in the investigation of the food resources of the country they were traversing, and Lackland got little of value from their conversations.

One of his own ideas, however, bothered him. He had been wondering just why the giants built their cities in such a fashion. They could hardly have been expecting either the tank or the *Bree*. It seemed a rather impractical way to repel invasion by others of their own kind who evidently, from the commonness of the custom, could hardly be taken by surprise.

Still, there was a possible reason. It was just a hypothesis; but it would account for the city design, and for the lack of natives in the country outside, and for the absence of anything resembling farm lands in the neighborhood of the

cities. It involved a lot of "if-ing" on Lackland's part even to think of such an idea in the first place, and he did not mention it to Barlennan.

For one thing, it left unexplained the fact that they had come this far unmolested—if the idea were sound, they should by this time have used up a great deal more of the quick-firer's ammunition. He said nothing, therefore, and merely kept his own eyes open; but he was not too surprised, one sunrise, when they had come perhaps two hundred miles from the city where Hars received his injuries, to see a small hillock ahead of the cavalcade suddenly rear up on a score of stubby, elephantine legs, lift as far as possible a head mounted on a twenty-foot neck, stare for a long moment out of a battery of eyes, and then come lumbering to meet the oncoming tank.

Barlennan for once was not riding in his usual station on the roof, but he responded at once to Lackland's call. The Earthman had stopped the tank, and there were several minutes to decide on a course of action before the beast would reach them at its present rate of speed.

"Barl, I'm willing to bet you've never seen anything like that. Even with tissue as tough as your planet produces, it could never carry its own weight very far from the equator."

"You are quite right; I haven't. I have never heard of it, either, and don't know whether or not it's likely to be dangerous. I'm not sure I want to find out, either. Still, it's meat; maybe—"

"If you mean you don't know whether it eats meat or vegetables, I'll bet on the former," replied Lackland. "It would be a very unusual plant-eater that would come toward something even larger than itself immediately upon sighting it—unless it's stupid enough to think the tank is a female of its own species, which I very much doubt. Also, I was thinking that a large flesh-eater was the easiest way to explain why the giants never seem to come out of their cities, and have them built into such efficient traps. They probably lure any of these things that come to their hilltops by showing themselves at the bottom, as they did with us, and then kill them with rocks as they tried

on the tank. It's one way of having meat delivered to your front door."

"All that may be true, but is not of present concern," Barlennan replied with some impatience. "Just what should we do with this one? That weapon of yours that broke up the rock would probably kill it, but might not leave enough meat worth collecting; while if we go out with the nets we'll be too close for you to use it safely should we get in trouble."

"You mean you'd consider using your nets on a thing that size?"

"Certainly. They would hold it, I'm sure, if only we could get it into them. The trouble is that its feet are too big to go through the meshes, and our usual method of maneuvering them into its path wouldn't do much good. We'd have to get the nets around its body and limbs somehow, and then pull them tight."

"Have you a method in mind?"

"No—and we wouldn't have time to do much of the sort anyway; he'll be here in a moment."

"Jump down and unhitch the sled. I'll take the tank forward and keep him occupied for a while, if you want. If you decided to take him on, and get in trouble later, you and your crew should be able to jump clear before I use the gun."

Barlennan followed the first part of the suggestion without hesitation or argument, slipping off the rear of the deck and undoing with a single deft motion the hitch which held the tow cable to the tank. Giving a hoot to let Lackland know the job was done, he sprang aboard the *Bree* and quickly gave his crew the details of the new situation. They would see for themselves by the time he had finished, for the *Flyer* had moved the tank forward and to one side, clearing their line of sight to the great animal. For a short time they watched with much interest, some astonishment, but no fear as the tank maneuvered with its living counterpart.

The creature stopped as the machine resumed its forward motion. It's head dropped down to a yard or so from the ground, and the long neck swung as far as possible first to one side and then the other, while the multiple eyes took in the situation from all possible angles. It paid no attention to the *Bree*; either it

failed to notice the small movements of the crew, or regarded the tank as a more pressing problem. As Lackland moved toward one flank, it slewed its gigantic body around to keep facing it squarely. For a moment the Earthman thought of driving it into a full hundred and eighty degree turn, so that it would be facing directly away from the ship; then he remembered that this would put the *Bree* in his line of fire should he have to use the gun, and stopped the circling maneuver when the stranded sled was at the monster's right. With that eye arrangement, it would be as likely to see the sailors moving behind it as in front, anyway, he reflected.

Once more he moved toward the animal. It had settled down, belly to the ground, when he had stopped circling; now it rose once more to its many legs and drew its head back almost into its great trunk, in what was apparently a protective gesture. Lackland stopped once more, seized a camera, and took several photographs of the creature; then, since it seemed in no mood to press an attack, he simply looked it over a minute or two.

Its body was a trifle larger than that of an Earthly elephant; on Earth, it might have weighed eight or ten tons. The weight was distributed about evenly among the ten pairs of legs, which were short and enormously thick. Lackland doubted that the creature could move much faster than it had already. That fact would have cast some doubt upon the theory that it was a flesh eater, since it was hard to imagine how it could catch anything to eat; but the head left little question.

It was some four feet long, and enough of the teeth protruded past the lips to show that it would have had a hard time chewing vegetables. One pair of tusks projected upward from the lower jaw for a distance of some eighteen inches, and gave some clue to their owner's method of combat. Behind the long snout the head was almost globular; at first glance the creature might have been assumed to possess considerable brain capacity, but in fact the lower part of the head was occupied by the giant jaw muscles and the upper half by a crown of half a dozen

eyes. None of these were actually in the back of the head, but they extended far enough around the sides to give their owner practically full-circle vision. The coloration, on top at least, was a mixture of irregular black and white stripes which blended rather well with the present landscape, in which the ropy black vegetation extended everywhere through the snow which had not melted.

After a minute or two of waiting, the creature began to grow restless; its head protruded a little and began to swing back and forth as though looking for other enemies. Lackland, fearing that its attention would become focused on the now helpless *Bree* and her crew, moved the tank forward another couple of feet; his adversary promptly resumed its defensive attitude. This was repeated several times, at intervals which grew progressively shorter. The feinting lasted until the sun sank behind the hill to the west; as the sky grew dark Lackland, not knowing whether the beast would be willing or able to carry on a battle at night, modified the situation by turning on all the tank's lights. This, at least, would presumably prevent the creature from seeing anything in the darkness beyond, even if it were willing to face what to it must be a new and strange situation.

Quite plainly, it did not like the lights. It blinked several times as the main spotlight burned into its eyes, and Lackland could see the great pupils contract; then, with a wailing hiss that was picked up by the roof speaker and clearly transmitted to the man inside, it lumbered a few feet forward and struck.

Lackland had not realized that he was so close—or, more correctly, that the thing could reach so far. The neck, even longer than he had at first estimated, snapped to full length, carrying the massive head forward and a trifle to one side. As it reached full travel, the head tipped a trifle and came slashing sideways. One of the great tusks clanged resoundingly against the tank's armor, and the main light went out in the same instant. Another, shriller hiss suggested to Lackland that the current feeding the light had grounded into the armor through some portion of the monster's head; but

he was not taking time out to analyze the possibility. He backed away hastily, cutting the cabin lights as he did so. He did not want one of those tusks striking a cabin port with the force it had just expended on the upper armor. Now only the running lights, mounted low in the front of the vehicle and set well into the armor, were illuminating the scene. The animal, encouraged by Lackland's retreat, lurched forward and struck one of these.

The Earthman did not dare extinguish it, since it would have left him effectively blind; but he sent a frantic call on the radio.

"Barl! Are you doing anything about your nets? If you're not about ready for action, I'm going to have to use the gun on this thing, meat or no meat. You'll have to stay away if I do; he's so close that high explosive would endanger the tank, and I'll have to use thermite."

"The nets are not ready, but if you'll lead him back a few more yards he'll be downwind of the ship, and we can take care of him another way."

"All right." Lackland did not know what the other way could be, and was more than a little doubtful of its effectiveness whatever it was; but as long as retreat would suit the captain he was prepared to co-operate. It did not for an instant occur to him that Barlennan's weapon might endanger the tank; and, in all fairness, it probably did not occur to Barlennan either.

The Earthman, by dint of repeated and hasty withdrawals, kept the tusks from his plating most of the time; the monster did not seem to have the intelligence to anticipate motion on his part. Actually it probably did not need that much brain, since its own head motions were so rapid that very few creatures were probably able to dodge it successfully. Lackland avoided trouble principally by remaining near the limit of its reach; the motion of the bulky body, of course, was slow, clumsy, and easy to anticipate. Two or three minutes of this dodging satisfied Barlennan.

He, too, had been busy in those minutes. On the leeward rafts, toward the dueling monster and machine, were four devices closely resembling bellows, with

hoppers mounted above their nozzles. Two sailors were now at each bellows, and at their captain's signal began pumping for all they were worth. At the same time a third operator manipulated the hopper and sent a stream of fine dust flowing into the current from the nozzle. This was picked up by the wind and carried toward the combatants. The darkness made it difficult to estimate its progress; but Barlennan was a good judge of wind, and after a few moments of pumping suddenly snapped another order.

The hopper crews promptly did something at the nozzle of the bellows each was tending; and as they did so, a roaring sheet of flame spread downwind from the *Bree* to envelope both of the fighters. The ship's crew were already sheltered behind their tarpaulins, even the "gunners" being protected by flaps of fabric that formed part of their weapons; but the vegetation that sprouted through the snow was neither tall nor dense enough to shelter the fighters.

Lackland, using words that he had never taught Barlennan, hurled the tank backward out of the flame cloud with a prayer for the quartz in his portholes. His adversary, though evidently as anxious to dodge, seemed to lack the necessary control. It lurched first one way, then the other, seeking escape. The flame died out in seconds, leaving a cloud of dense white smoke which gleamed in the tank's running lights; but either the brief fire had been sufficient or the smoke was equally deadly, for the monster's disorganization grew steadily worse. Its aimless steps grew shorter and feebler as the legs gradually lost the power to support its vast bulk, and presently it stumbled and rolled on one side. The legs kicked frantically for a time, while the long neck alternately retracted and stretched to full length, lashing the fanged head frantically through the air and against the ground.

By sunrise the only remaining motion was an occasional twitch of head or leg; within a minute or two thereafter all activity of the giant creature ceased. The crew of the *Bree* had already swarmed overboard and across the dark patch where the snow had boiled from the

ground, bent on acquiring meat. The deadly white cloud was farther downwind now, and gradually settling. Lackland was surprised to note traces of *black* dust on the snow where the cloud had passed.

"Barl, what on Earth—or rather, on Mesklin—was the stuff you used for that fire cloud? And didn't it occur to you that it might crack the windows in this tank?" The captain, who had remained on the ship and was near one of his radios, answered promptly.

"I'm sorry, Charles; I didn't know what your windows are made of, and never thought of our flame cloud as a danger to your great machine. I will be more careful next time. The fuel is simply a dust which we obtain from certain plants—it is found as fairly large crystals, which we have to pulverize very carefully and away from all light."

Lackland nodded slowly, digesting this information. His chemical knowledge was slight, but it was sufficient to make a good guess at the fuel's nature. Ignited by light—burned in hydrogen with a white cloud—black specks on the snow—it could, as far as he knew, be only one thing. Chlorine is solid at Mesklin's temperature; it combines violently with hydrogen, and hydrogen chloride is white when in fine powder form; methane snow boiled from the ground would also give up its hydrogen to the voracious element and leave carbon. Interesting plant life this world sported! He must make another report to Toorey—or perhaps he had better save this tidbit in case he annoyed Rosten again.

"I am very sorry I endangered your tank." Barlennan still seemed to feel apologetic. "Perhaps we had better let you deal with such creatures with your gun; or perhaps you could teach us to use it. Is it, like the radios, especially built to work on Mesklin?" The captain wondered if he had gone too far with this suggestion, but decided it had been worth it. He could neither see nor interpret Lackland's answering smile.

"No, the gun was not remade or changed for this world, Barl. It works fairly well here, but I'm afraid it would be pretty useless in your country. Let's see—it's

mounted about eight feet off the ground, and its muzzle velocity is about fifteen hundred feet per second—nothing wonderful as firearms go. If I fired it horizontally at the south pole, the shell would strike the ground about thirty of your lengths, less than fifty feet, from the muzzle. That's better than anything else you'd be likely to have, I admit, but I'm afraid projectile weapons will always be pretty useless to you and your people." He picked up a slide rule, and added one more sentence after employing it for a moment. "The farthest this thing could possibly shoot at your pole would be just about three times the distance I mentioned—one hundred and fifty feet."

Barlennan, disappointed, said nothing further. Several days were spent in butchering the dead monster. Lackland salvaged the skull as a further protection from Rosten's ire, and the cavalcade resumed its journey.

Mile after mile, day after day, the tank and its tow inched onward. Still they sighted occasional cities of the rock-rollers; two or three times they picked up food for Lackland which had been left in their path by the rocket; quite frequently they encountered large animals, some like the one Barlennan's fire had slain, others very different in size and build. Enough of them were carnivorous to explain the habits of the rock-rollers and apparently justify Lackland's ideas about these people; enough herbivorous forms existed to support the flesh-eaters.

The country grew hillier as they progressed, and the larger animals seemed to prefer the hills, so their encounters increased in frequency. Usually the tank outran the carnivores, but sometimes it could not. When this happened the gun was used, unless the position permitted the use of fire without endangering ship or tank. Twice specimens of the giant herbivores were netted and killed by the crew to furnish meat, much to Lackland's admiration. The discrepancy in size was far greater than that existing between Earthly elephants and the African pygmies who sometimes hunted them.

With the rising ground, the river, which they had followed intermittently for hundreds of miles, shrank and split into

numerous smaller streams. Two of these tributaries had been rather difficult to cross, requiring that the *Bree* be unlashd from the sled and floated across at the end of a towrope while tank and sled drove below the surface on the river bed. Now, however, the streams had become so narrow that the sled actually bridged them and no such delays occurred.

At long last, fully twelve hundred miles from where the *Bree* had wintered and some three hundred south of the equator, with Lackland bowing under an additional half gravity, the streams began to bear definitely in the general direction of their travel. Both Lackland and Barlennan let several days pass before mentioning it, wishing to be sure, but at last there was no more doubt that they were in the watershed leading to the eastern ocean. Morale, which had never been low, nevertheless improved noticeably; and several sailors could now always be found on the tank's roof hoping for the first glimpse of the sea as they reached each hilltop. Even Lackland, tired sometimes to the point of nausea, brightened up; and as his relief was the greater, so proportionately greater was his shock and dismay when they came, with practically no warning, to the edge of an escarpment; an almost sheer drop of over sixty feet, stretching as far as the eye could see at right angles to their course.

CHAPTER IX.

FOR long moments nothing was said. Both Lackland and Barlennan, who had worked so carefully over the photographs from which the map of their journey had been prepared, were far too astonished to speak. The crew, though by no means devoid of initiative, decided collectively and at the first glance to leave this problem to their captain and his alien friend.

"How could it have been there?" Barlennan was first to speak. "I can see it's not high, compared to the vessel from which your pictures were taken, but should it not have cast a shadow far across the country below, in the minutes before sunset?"

"It should, Barl, and I can think of

only one reason it escaped us. Each picture, you recall, covered many square miles; one alone would include all the land we can see from here, and much more. The picture that does cover this area must have been made between sunrise and noon, when there would have been no shadow."

"Then this cliff does not extend past the boundary of that one picture?"

"Possibly; or, just as possibly, it chanced that two or three adjacent shots were all made in the morning—I don't know just what course the photo rocket flew. If, as I should imagine, it went east and west, it wouldn't be too great a coincidence for it to pass the cliff several times at about the same time of day.

"Still, there's little point in going through that question. The real problem, since the cliff obviously *does* exist, is how to continue our journey." That question produced another silence, which lasted for some time. It was broken, to the surprise of at least two people, by the first mate.

"Would it not be advisable to have the Flyer's friends far above learn for us just how far this cliff extends to either side? It may be possible to descend an easier slope without too great a detour. It should not be hard for them to make new maps, if this cliff was missed on the first." Barlennan translated this remark, which was made in the mate's own language. Lackland raised his eyebrows.

"Your friend may as well speak English himself, Barl—he appears to know enough to understand our last conversation. Or do you have some means of communicating it to him that I don't know about?"

Barlennan whirled on his mate startled and, after a moment, confused. He had not reported the conversation to Dondragmer; evidently the Flyer was right—his mate had learned some English. Unfortunately, however, the second guess had also some truth; Barlennan had long been sure that many of the sounds his vocal apparatus could produce were not audible to the Earthman, though he could not guess at the reason. For several seconds he was confused, trying to decide whether it would be better to reveal Dondragmer's ability, the secret of their

communication, both together, or, if he could talk fast enough, neither.

Barlennan had nothing against the Earthman; but he wanted something from him that he suspected the alien would not give willingly. Any secrets which might later be used in tricking him should, for that reason, be preserved. On the other hand, if he tried to talk his way out of revealing a fact and were detected, Lackland could hardly fail to become both suspicious and distrustful. Too much time spent in reaching a decision could have this effect, too; some answer must be made at once. Barlennan did the best he could.

"Apparently Dondragmer is sharper than I realized. Is it true that you have learned some of the Flyer's language, Don?" This he asked in English, and in a pitch that Lackland could hear. In the shriller tones that his own language employed so much he added, "Tell the truth—I want to cover up as long as possible the fact that we can talk without his hearing. Answer in his own language, if you can." The mate obeyed, though not even his captain could have guessed at his thoughts.

"I have learned much of your language, Charles Lackland. I did not realize you would object."

"I don't mind at all, Don; I am very pleased, and, I admit, surprised. I would gladly have taught you as well as Barl if you had come to my station. Since you have learned on your own—I suppose from comparing our conversations and your captain's resultant activities—please enter our discussion. The suggestion you made a moment ago was sound; I will call the Toorey station at once."

The operator on the moon answered immediately, since a constant guard was now being maintained on the tank's main transmitter frequency through several relay stations drifting in Mesklin's outer ring. He indicated understanding of the problem, and promised that a survey would be made as quickly as possible. Lackland, knowing the expense of operating even a hydrogen-iron rocket near Mesklin, suspected that his mission was now the only hope the expedition leader

retained of recovering the gravity data in the downed rocket.

"As quickly as possible," however, meant quite a number of Mesklin's days; and while waiting the trio endeavored to formulate other plans in case the cliff could not be rounded within a reasonable distance.

Physically, of course, the rocket was perfectly capable of lifting the weight of the *Bree* and its crew. If that had been practical, however, it would have been done long since; unfortunately, there was no method of slinging a load outside the craft, and the crew could not tolerate for an instant either the temperature or the atmosphere inside. If the pilot wore armor and the rocket were opened to Mesklinite conditions, it was more than likely that drastic results would occur to the internal mechanism of the ship. Also the *Bree*, like the sled she was now riding, would have to be disassembled to get through even the cargo lock, though her construction made that fact merely a nuisance rather than an impossibility. All these difficulties had been considered before Rosten had approved of the sled.

One or two of the sailors expressed a willingness to jump down the cliff, to Barlennan's anxiety—he felt that the natural fear of height should not be replaced with *complete* contempt, even though the entire crew now shared his willingness to climb and jump. Lackland was called upon to help dissuade these foolhardy individuals, which he managed to do by computing that the sixty-foot drop of the cliff was about equal to a one-foot fall at the latitude of their home country. This revived enough memory of childhood experience to put a stop to the idea. The captain, thinking over this event afterward, realized that by his own lifelong standards he had a crew composed entirely of lunatics, with himself well to the front in degree of aberration; but he was fairly sure that this particular form of insanity was going to be useful.

Ideas more practical than these were not forthcoming for some time; and Lackland took the opportunity to catch up on his sleep, which he badly needed. He had had two long sessions in his bunk, interrupted by a hearty meal, when the

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report of the surveying rocket came in. It was brief and discouraging. The cliff ran into the sea some six hundred miles north-east of their present location, almost exactly on the equator. In the opposite direction it ran for some twelve hundred miles, growing very gradually lower, and disappearing completely at about the five-gravity latitude. It was not perfectly straight, showing a deep bend away from the ocean at one point; the tank had struck at this point.

Two rivers fell over its edge within the limits of the bay, and the tank was neatly caught between them, since in the interests of common sanity the *Bree* could never be towed across without first going many miles upstream from the tremendous waterfalls. One of the falls was about thirty miles away, almost due south; the other, approximately a hundred miles distant to the north and east around the curve of the cliff. The rocket had not, of course, been able to examine the entire stretch of escarpment in complete detail from the altitude it had had to maintain, but the interpreter was very doubtful that the tank could scale it at any point. The best bet, however, would be near one of the waterfalls, where erosion was visible and might conceivably have created negotiable paths.

"How can a cliff like this form?" Lackland asked resentfully when he had heard all this. "Eighteen hundred miles of ridge just high enough to be a nuisance, and we have to run right into it. I bet it's the only thing of its kind on the planet."

"Don't bet too much," the surveyor retorted. "The physiography boys just nodded in pleasure when I told them about it. One of them said he was surprised you hadn't hit one earlier; then another piped up and said actually you'd expect most of them further from the equator, so it wasn't surprising at all. They were still at it when I left them. I guess you're lucky that your small friend is going to do most of the traveling for you."

"That's a thought." Lackland paused as another idea struck him. "If these faults are so common, you might tell me whether there are any more between here and the sea. Will you have to run another survey?"

"No. I saw the geologists before I started on this one, and looked. If you can get down this step, you're all right—in fact, you could launch your friend's ship in the river at the foot and he could make it alone. The river narrows in some places and the current is probably swift, but there don't seem to be any rapids or falls in either stream between the cliff and the ocean. Your only remaining problem is to get that sailboat hoisted over the edge."

"To get . . . hm-m-m. I know you meant that figuratively, Hank, but you may have something there. Thanks for everything; I may want to talk to you later."

Lackland turned away from the set and lay back on his bunk, thinking furiously. He had never seen the *Bree* afloat; she had been beached before he encountered Barlennan, and on the recent occasions when he had towed her across rivers he had himself been below the surface most of the time in the tank. Therefore, he did not know how high the vessel floated. Still, to float at all on an ocean of liquid methane she must be extremely light, since methane is less than half as dense as water. Also she was not hollow—did not float, that is, by virtue of a large central space which lowered her average density, as does a steel ship on Earth. The "wood" of which the *Bree* was made was light enough to float on methane and support the ship's crew and a substantial cargo as well.

An individual raft, therefore, could not weigh more than a few ounces—perhaps a couple of pounds, on this world at this point. At that rate, Lackland himself could stand on the edge of the cliff and let down several rafts at a time; any two sailors could probably lift the ship bodily, if they could be persuaded to get under it. Lackland himself had no rope or cable other than what he was using to tow the sled; but that was one commodity of which the *Bree* herself had an ample supply. The sailors should certainly be able to rig hoisting gear that would take care of the situation—or could they?

On Earth it would be elementary seamanship; on Mesklin, with these startling

but understandable prejudices against lifting and jumping and throwing and everything else involving any height, the situation might be different. Well, Barlennan's sailors could at least tie knots, and the idea of towing should not be too strange to them now; so undoubtedly the matter could be straightened out.

The real, final problem was whether or not the sailors would object to being lowered over the cliff along with their ship. Some men might have laid that question aside as strictly a problem for the ship's captain, but Lackland more than suspected that he would have to contribute to its solution.

Barlennan's opinion however, was certainly needed at this point; and reaching out a heavy arm, Lackland energized his smaller transmitter and called his tiny friend.

"Barl, I've been wondering. Why couldn't your people lower the ship over the cliff on cables, one raft at a time, and reassemble it at the bottom?"

"How would you get down?"

"I wouldn't. There is a large river about thirty miles south of here that should be navigable all the way to the sea, if Hank Stearman's report is accurate. What I'm suggesting is that I tow you over to the fall, help you any way I can in getting the *Bree* over the edge, watch you launch her in the river, and wish you the best of luck—all we can do for you from then on is give weather and navigation information, as we agreed. You have ropes, do you not, which will hold the weight of a raft?"

"Of course; ordinary cordage would take the weight of the entire ship in this neighborhood. We'd have to snub the lines against trees or your tank or something like that; the whole crew together couldn't furnish traction enough for the job. Still, that's no problem. I'd say you had the answer, Charles."

"How about the personnel? Will they like the idea of being lowered down that way?"

Barlennan thought for a moment. "I think it will be all right. I'll send them down on the rafts, with a job to do like fending off from the cliff. That will keep

them from looking straight down, and sufficiently occupied so they shouldn't be thinking of the height. Anyway, with this light feeling everyone has"—Lackland groaned silently—"no one's much afraid of a fall anyway; not even as much as they should be. We'll make that part, all right. Had we better start for that waterfall right away?"

"All right." Lackland hauled himself to his controls, suddenly very weary. His part of the job was nearly over, sooner than he had expected, and his body shrieked for relief from the endless weight it had dragged around for the last seven months. Perhaps he shouldn't have stayed through the winter, but tired as he was he could not regret it.

The tank swung to the right and started moving once more, parallel to the cliff edge two hundred yards away. The Mesklinites might be getting over their horror of heights, but Lackland was developing one. Besides, he had never attempted to repair the main spotlight since their first battle with Mesklin's animal life, and he had no intention of driving close to that edge at night with only the running lights to guide him. They pointed too nearly straight ahead for comfort—the edge of their beams might be confused with the rim of the escarpment until it was too late to rectify the error. Even at this distance Lackland was uneasy after sunset; and he finally asked Barlennan to have either himself or Dondragmer ride on the tank to give warning if he began to slant to the left. He had learned long since that the natives, while not in a class with Terrestrial cats or owls, could see at night rather better than a man.

They made the waterfall in a single lap of about twenty days. Both natives and Earthman heard it long before they arrived, at first a vague trembling in the air that gradually rose through a muted thunder to a roar that put even the Mesklinite vocal equipment to shame. It was day when they came in sight of it, and Lackland stopped involuntarily as they did so. The river was half a mile wide where it reached the brink, and smooth as glass—no rocks or other irregularities appeared to exist in its bed. It simply

curled over the edge and spilled downward.

The fall had eroded its way for a full mile back from the cliff line; and they had a splendid view of the gorge. The lack of ripple marks gave no clue to the liquid's speed of fall, but the violence with which the spray erupted from the bottom did. Even in this gravity and atmosphere a permanent cloud of mist hid the lower half of the curved sheet, thinning gradually away from its foot to reveal the roiled, eddied surface of the lower river. There was no wind except that created by the fall itself, and the stream grew rapidly calmer as it moved smoothly away toward the ocean.

Lackland looked for a rainbow in the spray with something like a tinge of homesickness; but the sun was in the wrong position, and he wasn't sure that methane drops would produce one anyway. He must ask one of the physicists, he decided.

The crew of the *Bree* had gone overboard the moment the tank had stopped; and the way they were strung out along the rim of the gorge indicated that there would not be much morale difficulty during the descent. Now Barlennan called them back to the ship, and work commenced at once. Lackland relaxed once more while cordage was dragged forth and a plumb line dropped over the edge to secure a more precise measure of the cliff's height.

Some of the sailors began securing all loose gear about the rafts, though preparations for the original journey had left little to do in this respect; others reached down between the rafts and began unfastening the lashings which held them together and checking at the same time the buffers that held them safely apart. They were fast workers, and raft after raft was dragged away from the main body of the ship.

Barlennan and his first mate, once this work was well under way, went over to the edge to determine the best place for the lowering operation. The gorge itself was rejected at once; the river within its walls was too rough, even if they had wanted to do their reassembling while afloat. It turned out, however, that almost

any point on the cliff face would be suitable, so the officers quickly chose one as close as possible to the mouth of the gorge. The reassembled ship or its separate parts would have to be dragged to the river without the tank's help, and there was no point in making the journey any longer than necessary.

A scaffold of masts was arranged at the edge to give a point of suspension far enough out to prevent rope friction, though the masts were not long enough to hold a raft completely away from the cliff face; a block and tackle, which Lackland observed with interest, was attached to the scaffold, and the first raft dragged into position. All this was improvised, though the man did not realize it; the natives were not used to lifting objects any distance. It was adjusted in a rope sling that would carry it horizontally, the main cable attached to the sling and hitched around a tree, several sailors seized the cable, and the raft was pushed over the edge.

Everything held up, but Dondragmer and his captain inspected each part very, very carefully before the mate and one of the crew crawled aboard the platform that hung somewhat slanted against the rock an inch or so below the edge. For a moment after they had gone aboard everyone watched expectantly; but again nothing happened, and Dondragmer finally gave the signal to lower away.

All the crew members who were not on the cable rushed to the edge to watch the descent. Lackland would have liked to watch it himself, but had no intention of venturing either the tank or his armored person close enough to do so. Beside his own uneasiness at the height, the sight of the cordage the Mesklinites were using made him unhappy; it looked as though an Earthly clerk would scorn it for tying a two-pound bag of sugar, and knowing the qualities of Mesklinite animal and plant tissues didn't make it look any better. Still, no one seemed to worry, and sailors should certainly know ropes.

An excited hooting and general withdrawal from the edge indicated that safe arrival of the first raft, and Lackland blinked as the sailors proceeded to stack several more on top of each other while

the cable was being drawn up. Apparently no more time than could be helped was to be wasted. Confident as he was in Barlennan's judgment, the Earthman suddenly decided he wanted to watch the stack of rafts make the descent. He was on the point of donning his armor when he remembered that it was not necessary; he relaxed again, called Barlennan, and asked him to arrange one or more of the little communicators so that their "eyes" could cover the desired activity. The captain complied immediately, having a sailor lash one of the set to the scaffold so that it looked almost straight down and placing another on top of the pile of rafts which had just been secured in their rope sling.

Lackland switched from one to the other as the operation proceeded. The first was a trifle more disconcerting than he had expected, since the supporting cable was visible for only a few feet from the pickup lens and the load seemed to be floating down without support; the other gave him a view of the cliff face that would undoubtedly have been highly interesting to a geologist. With the descent half completed it occurred to him to call Toorey to invite the interested parties to watch. The geology department responded and commented freely during the rest of the process, but as far as Lackland could tell their remarks were mostly of the "it's obvious that" and "I told you so" variety. None of them bothered to tune in any of the "eyes" which were still with the *Bree's* gear, to get a look at the natives.

Load after load went down, with little variety to make the operation more interesting. Toward the end a longer cable was installed and the lowering was done from below, since the greater part of the crew had now descended; and Lackland had a suspicion of the reason when Barlennan finally turned away from the scene of action and leaped toward the tank. The radio which had been used from that position was permanently mounted, and had not been taken down with the others.

"We have only about two more loads, Charles," the captain said. "There will be a slight problem in connection with

the last one. We'd like to keep all our gear if possible, which means dismantling and sending down the masts used for our lowering tackle. We don't want to throw them down because we're not sure they'd take it—the soil below is very rocky. Would you be willing to get into your armor and lower the final load by hand? I will arrange for it to consist of one raft, those few masts and the associated tackle, and myself."

Lackland was startled by the last item. "You mean you would trust yourself to my strength, knowing that I'm already under three and a half times my normal gravity and will have the weight of my armor as well?"

"Certainly. The armor will easily be heavy enough to serve as anchor, and if you take a turn of the rope about your own body you can pay it out gradually. I don't see any difficulty; the load will be only a few of your pounds."

"Not that way, perhaps, but there's another point. Your rope is very thin indeed, and the handling clamps of my armor are somewhat clumsy when it comes to managing small objects. What if the cord slips out of my grip?"

That silenced Barlennan for a moment. "What is the smallest object you could handle with reasonable security?"

"Oh—one of your masts, I should say."

"There is no trouble, then. We will wind the rope about a mast, and you can use that as a windlass. You can toss mast and rope over afterwards; if the stick is broken the loss will not be too great." Lackland shrugged.

"It's your health and property, Barl. I don't have to say I'll be careful; I wouldn't want anything to happen to you, especially through my negligence. I'll be out shortly."

The Mesklinite, satisfied, leaped back to the ground and began to give the necessary orders to the few remaining sailors. The second last load went down with all these; and a few moments later the Earthman emerged from his conveyance.

Barlennan was waiting for him. A single raft now lay at the cliff edge, tied in its sling and ready to go. A radio and the bundled remains of the scaffolding lay

upon it, and the captain was dragging the mast which had the line wrapped about it toward Lackland. The man's approach was slow, for the terrible fatigue seemed to grow with every instant; but he finally reached a point about ten feet from the edge, reached over as far as his clumsy garment would permit, and took the mast from the tiny being who had reared up to meet him. Without a word of caution or any other suggestion of doubt in his big friend, Barlennan turned back to the raft, made sure its cargo was lashed securely, pushed it until it was teetering on the edge of the cliff, and climbed aboard.

He turned for a last look at Lackland, and the man could have sworn that he winked. Then, "Hang on, Charles," came the voice over the radio; and the captain stepped deliberately to the outer edge of the precariously balanced raft. His pincers were securely caught in the lashings, which was all that kept him aboard as the platform teetered once and slipped over the rim.

There was enough slack in the line Lackland was holding to permit a couple of feet of fall; and raft and passenger vanished instantly. A sharp jerk told the man that at least the line was still holding, and an instant later Barlennan's voice cheerfully conveyed the same information. "Lower away!" was the concluding phrase; and Lackland obeyed.

It was rather like handling a kite, at least in the form of windlass he was using—simply a cord wound on a stick. It revived childhood memories; but if he lost this kite he would, he knew, be much longer in getting over it. He did not have the best possible grip on the mast, and he slowly pivoted so as to wind the cord about his body before he tried to change holds. Then, satisfied, he paid out slowly.

Barlennan's voice came at intervals, always with something encouraging; it was as though the midget had an idea of the anxiety in Lackland's mind. "Half-way now," "Smooth going," "You know, I don't mind looking down even this far, now," "Almost there—just a little more—that's it; I'm down. Hold on to the tackle for a little, please; I'll tell you

when the area is clear and it's all right to throw it down."

Lackland continued to obey. For a keepsake, he tried to break off a foot or two from the end of the cable, but found it impossible even with armored hands. However, the edge of one of the locking snaps on his armor proved sharp enough to cut the stuff, and he wound the souvenir around his arm before starting to carry out the remaining requests of his ally.

"We have things out from underneath, Charles; you can let go of your end of the rope and toss the mast over whenever you want." The fine cord slithered instantly out of sight, and the ten-inch twig that was one of the *Bree's* main booms followed. Seeing things fall free in triple gravity, Lackland found, was even worse than thinking about it. Maybe it would be better at the poles—then you couldn't see them at all. Not where an object falls some two miles in the first second! But perhaps the abrupt vanishing would be just as hard on the nerves. Lackland shrugged off these thoughts, and turned back to the tank.

For the couple of hours the process took he watched the *Bree's* reassembly through the vision sets. With just the traces of a wish that he might go along, he saw the cluster of rafts pushed out into the broad stream, and listened to the farewells of Barlennan, Dondragmer, and the crew—he could guess at the meaning of the sounds uttered even by the sailors who spoke no English. Presently the current bore the vessel far enough from the cliff to be seen from the tank's position. Lackland raised a hand silently in farewell, and watched her as she shrank slowly and finally vanished toward the distant sea.

For long minutes he sat silently; then roused himself to call the Toorey base.

"You may as well come and pick me up, I've done all I can on the surface."

CHAPTER X.

THE river, once away from the vicinity of the great fall, was broad and slow. At first the air trapped by the descending water furnished a breeze toward the sea, and Barlennan ordered the sails set to

take advantage of it; but this presently died out and left the ship at the mercy of the current. This was going in the right direction, however, and no one complained. The land adventure had been interesting and profitable, for several of the plant products collected could certainly be sold at high prices once they reached home; but no one was sorry to be afloat again. Some looked back at the waterfall as long as it could be seen, and once everyone stared into the west to catch a glimpse of the rocket as the muted thunder of its approach reached them; but in general the feeling was one of anticipation.

A new sea lay ahead—one that no member of their nation had ever ridden. There would be new and strange people to meet, certainly to trade, perhaps to fight as well. Captain Cook sailing into the South Seas for the first time must have felt much as these beings felt—sailors as well as officers, for any who were so lacking in imagination as to go wherever Barlennan ordered without thought or interest had long since dropped away from his crew.

There were no present worries; the Flyers far above had said that river had no falls or rapids all the way to the sea. There were none for the immediate future, either; there was so much food aboard that most of the sailors did not even bother to fish, much as they normally preferred fresh food. For the moment, there was practically nothing to do except speculate on what the future might hold; and morale was so high that not even Dondragmer felt there was any need of inventing work to stop talk.

The banks on either side began to draw more and more attention as they proceeded. During their overland journey they had become accustomed to the sight of an occasional upright growth of the sort that the Flyer had called a "tree," usually seeing one every few days. They had been fascinating objects at first, and had, indeed, proved a source of one of the foods they planned to sell at home.

Now the trees were becoming more and more numerous, threatening to replace the more familiar sprawling, rope-branched plants entirely, and Barlennan

began to wonder if even a colony planted here might not be able to support itself by trade in what the Flyer had called fir-cones—he had said the fruit closely resembled an object that went by that name on his own world. Of course, if they proved too common the price would go down—but no, they would never be common on the shores of *his* ocean while travel between the seas was this difficult. It was a project worth considering. Of course, some of the giant natives they had met above the cliff might be here too, and that could be either good or bad. Depending. The last thought was a cryptic one, and Barlennan shifted his speculation to other directions.

For a long time, fully fifty miles, no intelligent life was sighted, though animals in fair numbers were seen along the banks. The river itself teemed with fish, though none appeared large enough to constitute a danger to the *Bree*. Eventually the river on either side became lined with trees, which extended no one could tell how far inland; and Barlennan, spurred by curiosity, ordered the ship steered closer to shore to see what a forest—he had no such word for it, of course—looked like.

It was fairly bright even in the depths of the woods, since the trees did not spread out at the top nearly as much as is common on Earth, but it was strange enough. Drifting along almost in the shadow of the weird plants, many of the crew felt a resurgence of their old terror of having solid objects overhead; and there was a general feeling of relief when the captain silently gestured the helmsman to steer away from the bank once more.

If anyone lived there they were welcome to it. Dondragmer expressed this opinion aloud, and was answered by a general mutter of approval. Unfortunately, his words were either not heard or not understood by listeners on the bank. Perhaps they were not actually afraid that the *Bree's* crew meant to take their forest away from them, but they decided to take no chances; and once more the visitors from high-weight suffered an experience with projectile weapons.

The armory this time consisted en-

tirely of spears. Six of them flew silently from the top of the bank and stuck quivering in the *Bree's* deck; two more glanced from the protective shells of sailors and clattered about on the rafts before coming to rest. The sailors who had been hit leaped convulsively from pure reflex, and both landed yards away in the river. They swam back and clambered aboard without assistance, for all eyes were directed toward the source of the mysterious attack. Without orders the helmsman angled more sharply toward the center of the river.

"I wonder who sent those—and if they used a machine like the Flyer's. There wasn't the same noise." Barlennan spoke half aloud, not caring whether he were answered. Terblannen wrenched one of the spears out of the deck and examined its hardwood point; then experimentally, he threw it back at the receding shore. Since throwing was a completely new art to him, except for experiments such as he had made in getting objects to the top of the tank in the stone-rollers' city, he threw it as a child throws a stick, and it went spinning end over end back to the woods. Barlennan's question was partly answered; short as his crewman's arms were, the weapon reached the bank easily.

The invisible attackers at least didn't need anything like Lackland's gun if they were anything like ordinary people physically. They might, of course, be giants such as they had met already; Barlennan suddenly realized that he had no idea of the physical strength of those beings, since none of his crew had become involved hand-to-hand with them in that fight. There seemed no way to tell what the present attackers were, and the captain had no intention of finding out by direct examination.

The *Bree* kept on downstream, while an account of the affair went winging up to Lackland on distant Toorey. It was a comfort, felt even by the sailors who could not understand his language, to be able to talk to this mysterious and powerful being even though he was no longer with them. His answer in the present case was a little mysterious, even to Barlennan.

"For a planet that should be dead and in cold storage, Mesklin can certainly keep a person hopping." Nothing more came of the incident.

For fully a hundred miles the forest continued while the river widened gradually. The *Bree* kept out in midstream for a time after her single encounter with the forest dwellers, but even that did not keep her completely out of trouble. Only a few days after the arrival of the spears, a small clearing was sighted on the left bank. His view point only a few inches off the surface prevented Barlennan from seeing as well as he would have liked, but there were certainly objects in that clearing worthy of examination.

After some hesitation he ordered the ship a little closer to that bank. The objects looked a little like trees, but were shorter and thicker. Had he been a little higher he would have seen small openings in them just above ground level which might have been informative; Lackland, watching through one of the vision sets, compared the things at once to pictures he had seen of the huts of African natives, but he said nothing yet.

Actually he was more interested in a number of other items lying partly in and partly out of the river in front of what he already assumed to be a village. They might have been logs or crocodiles, for they were not too clearly visible at this distance, but he rather suspected they were canoes. It would be interesting to see how Barlennan reacted to a boat so radically different from his own.

It was quite a while, however, before anyone on the *Bree* realized that the "logs" were canoes or the other mysterious objects dwellings. For a time, in fact, Lackland feared that they would drift on downstream without ever finding out; their recent experience had made Barlennan very cautious indeed. However, there were others besides Lackland who did not want the ship to drift by without stopping, and as she approached the point on her course opposite the village a red-and-black flood of bodies poured over the bank and proved that the Earthman's conjecture had been correct. The loglike objects were pushed into the stream, each carrying fully a dozen crea-

tures who apparently belonged to the identical species as the *Bree's* crew. They were certainly alike in shape, size, and coloring; and as they approached the ship they uttered ear-splitting hoots precisely like those Lackland had heard on occasion from his small friends.

The canoes were apparently dugouts, hollowed out sufficiently so that only the head end of each crew member could be seen; from their distribution, Lackland suspected that they lay herringbone fashion inside, with the paddles operated by the foremost sets of pincer-equipped arms. Actually they sculled rather than paddled; the blades were not lifted from the water at any time, and there seemed to be little back-and-forth movement.

None of Barlennan's crew analyzed these points; what interested them was the fact that the canoes were approaching far more rapidly than the *Bree* had ever moved except in a full gale. If their paddlers should prove hostile, as recent incidents made probable, there was nothing that could be done to avoid a fight; there was practically no wind, and what there was blew straight toward the left bank from which the canoes had come.

The crew unobtrusively took up their stations on the outer rafts, weapons beside them. The leeward flamethrowers were manned, though Barlennan doubted that they would be useful under these conditions. Krendoranic, the munitions officer, was working furiously at one of his storage bins, but no one knew what he was up to; there was no standard procedure for his department in such a situation. Actually, the entire defense routine of the ship was being upset by the lack of wind, something that almost never occurred on the open sea.

Any chance there might have been to make effective use of the flame dust vanished as the fleet of canoes opened out to surround the *Bree*. Two or three yards from her on all sides they glided to a stop, and for a minute or two there was silence. To Lackland's intense annoyance, the sun set at this point and he was no longer able to see what went on. The next eight minutes he had to spend trying to attach meaning to the

weird sounds that came over the set, which was not a very profitable effort since none of them formed words in any language he knew. There was nothing that denoted any violent activity; apparently the two crews were simply speaking to each other in experimental fashion. He judged, however, that they could find no common language, since there appeared to be nothing like a sustained conversation.

With sunrise, however, he discovered that the night had not been wholly uneventful. By rights, the *Bree* should have drifted some distance downstream during the darkness; actually, she was still opposite the village. Furthermore she was no longer far out in the river, but only a few yards from the bank.

Lackland was about to ask Barlennan what he meant by taking such a risk, and also how he had managed to maneuver the *Bree*, when it became evident that the captain was just as surprised as he at this turn of events. His voice could be heard issuing a steady stream of comment, orders, and, Lackland suspected, invective in his own language, rising steadily in pitch until he finally seemed to lose his voice entirely. The Earthman could have learned much from that fact if he had been able to interpret it correctly.

Instead, he failed even to notice it particularly. Wearing a slightly annoyed expression, he turned to one of the men sitting beside him—the receiving screens for Barlennan's vision sets had been set up in a small auditorium in the station on Toorey, and expedition members who had nothing else to do could usually be found there—with the remark:

"Barl has let himself get into trouble already. I know he's a smart fellow, but with over thirty thousand miles to go I don't like to see him getting held up in the first hundred."

"Aren't you going to help him? There are a couple of billion dollars, not to mention a lot of reputations, riding with him."

"What can I do? All I could give would be advice, and he can size up the situation better than I can. He can see it

better, and is dealing with his own sort of people."

"From what I can see, they're about as much his sort as the South Sea Islanders were Captain Cook's. I grant they appear to be the same species, but if they're, say, cannibals, your friend may really be in hot water."

"I still couldn't help him, could I? How do you talk a cannibal out of a square meal when you don't know his language and aren't even facing him in person? What attention would he pay to a little square box that talked to him in a strange language?"

The other raised his eyebrows a trifle. "While I'm not mind reader enough to predict that one in detail, I would suggest that in such a case he might just possibly be scared enough to do almost anything. As an ethnologist I can assure you that there are primitive races on a lot of planets, including our own Earth, who would bow down, hold square dances, and even make sacrifices to a box that talked to them."

Lackland digested that remark in silence for a few moments, nodded thoughtfully, and turned back to the screens.

A number of sailors had seized spare masts and were trying to pole back toward the center of the river, but were having no success. Dondragmer, after a brief investigation around the outer rafts, reported that they were in a cage formed of piles driven into the river bed; only the upstream side was open. It might or might not be coincidence that the cage was just large enough to accommodate the *Bree*—no one had noticed sounds during the night that might have betokened its construction.

As this report was made, the canoes drifted away from the three closed sides of the cage and congregated on the fourth; and the sailors, who had heard the mate's report and prepared to pole in the upstream direction, looked to Barlennan for instructions. After a moment's thought, he motioned the crew to the far end of the ship and crawled alone to the end facing the assembled canoes. He had long since figured out how his ship had been moved; with the coming of darkness

some of the paddlers must have gone quietly overboard, swum beneath the *Bree*, and pushed her where they wanted. There was nothing too surprising in that; he himself could exist for some time beneath the surface of river or ocean, which normally carried a good deal of dissolved hydrogen. What bothered him was just why these people wanted the ship.

As he passed one of the provision lockers he pulled back its cover and extracted a piece of meat. This he carried to the edge of the ship and held out toward the crowd of now silent captors. Presently some unintelligible gabbling sounded among them; then this ceased, as one of the canoes eased slowly forward and a native in the bow reared up and forward toward the offering. Barlennan let him take it. It was tested, and commented upon; then the chief, if that was his position, tore off a generous fragment, passed the rest back to his companions, and thoughtfully consumed what he had kept.

Barlennan was encouraged; the fact that he hadn't kept it all suggested that these people had some degree of social development. Obtaining another piece, the captain held it out as before; but this time, when the other reached for it, it was withheld. Barlennan put it firmly behind him, crawled to the nearest of the piles that were imprisoning his ship, indicated it, gestured to the *Bree*, and pointed out into the river. He was sure his meaning was plain, as undoubtedly it was; certainly the human watchers far above understood him, though no word of their language had been used. The chief, however, made no move. Barlennan repeated the gestures, and finished by holding out the meat once more.

Any social consciousness the chief possessed must have been strictly in connection with his own society; for as the captain held out the meat a second time a spear licked out like the tongue of a chameleon, impaled the food, jerked it out of Barlennan's grasp, and was withdrawn before any one of the startled sailors could move. An instant later the chief gave a single barking order; and as he did so half the crew of each of the canoes behind him leaped forward.

The sailors were completely unused to aerial assault, and had also relaxed a trifle when their captain began his negotiation; in consequence, there was nothing resembling a fight. The *Bree* was captured in something less than five seconds, with two husky natives equipped with knives stationed, quite evidently ready for action, beside each member of the crew.

A committee headed by the chief began at once to investigate the food lockers, and their satisfaction was evident even through the language barrier. Barlennan watched with dismay as the meat was dragged out on deck in obvious preparation for transferral to a canoe, and for the first time it occurred to him that there was a possible source of advice which he had not yet used.

"Charles!" he called, speaking English for the first time since the incident had begun. "Have you been watching?"

Lackland, with mixed anxiety and amusement answered at once. "Yes, Barl; I know what's been going on."

He watched the *Bree's* captors for reaction as he spoke, and had no reason to feel disappointment. The chief, who had

been facing away from the point where the radios were lashed in the center of the ship, switched ends like a startled rattlesnake and then began looking around for the source of the voice with an unbelievably human air of bewilderment. One of his men who had been facing the radios indicated to him the one whose speaker Lackland had used, but after poking around the impenetrable box with knife and lance the chief obviously rejected this suggestion. This was the moment the Earthman chose for speaking again.

"Do you think there's any chance of getting them scared of the radios, Barl?"

The chief's head was about two inches from the speaker this time, and Lackland had made no effort to reduce the volume. Consequently there was no question where the sound had come from; and the chief began backing away from the noisy box. He was evidently trying to go slowly enough to satisfy his self-respect and fast enough to suit his other emotions, and once again Lackland had trouble in not laughing aloud.

Before Barlennan had a chance to

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reply Dondragmer, who Lackland was beginning to think must be some kind of mind reader, moved over to the pile of meat, selected a choice piece, and laid it in front of the radio set with every indication of humility. He had taken a chance on having a pair of knives meet in his body, and knew it; but his guards were too absorbed by the new situation to take offense at his motion. Lackland, understanding how the mate had interpreted his own lead, followed on! he reduced the volume in the hope that his next utterance would seem less like anger to the canoeists, and heartily approved the mate's action.

"Good work, Don. Every time one of you does something like that I'll try to show approval; and I'll bark like nobody's business at anything I don't want our new acquaintances to be doing. You know the appropriate actions better than I, so just do everything in your power to make 'em think these radio boxes are high-powered beings who'll deliver lightning if properly annoyed."

"I understand; we can hold our end," replied the mate. "I gathered that was what you had in mind."

The chief, gathering his courage once more, suddenly lunged at the nearest radio with his spear. Lackland remained silent, feeling that the natural result on the wooden point would be impressive enough; the sailors entered with a will into the game outlined by the Flyer. With what Lackland supposed were the equivalent of gasps of pious horror, they turned away from the scene and covered their eyes with their pincers.

After a moment, seeing that nothing further was happening, Barlennan offered another piece of meat, at the same time gesturing in a way meant to convey the impression that he was begging for the life of the ignorant stranger. The river people were quite evidently impressed, and the chief drew back a little, gathered his committee, and began to discuss the whole situation with them.

One of the guards reached slyly for a piece of the food that had been offered to the radio, and the sailor beside him went to the length of holding him back, giving every indication he could of horror.

The similarity in natural gesture between all of these people, that had helped so much in trading with the giants, was in full play here as well; and the people of the river were becoming convinced more thoroughly every moment that the radio boxes were objects with which it would be wise to remain on friendly terms.

Finally one of the chief's counselors, in what was evidently an experiment, picked up a piece of meat and gave it to the nearest radio. Lackland was about to express gentle thanks when Dondragmer's voice came, "Refuse it!" Not knowing why but willing to trust the mate's judgment, Lackland turned up the volume and emitted a lionlike roar. The donor leaped back in genuine and unmistakable terror; then, at a sharp order from the chief, he crawled forward, retrieved the offending bit of food, selected another from the pile on the deck, and presented that.

"All right." It was the mate's voice again, and the Earthman lowered the volume of the speaker.

"What was wrong the other time?" he asked quietly.

"I wouldn't have given that piece to a *ternee* belonging to my worst enemy," replied Dondragmer. "I don't know what attributes a being like you would be expected to have, but in my experience the higher-up an individual is placed the choosier he gets."

"I keep finding resemblances between your people and mine in the darnedest situations," Lackland remarked. "I hope this business is suspended for the night; I can't see what's going on in the dark. If anything happens that I should react to, be sure to tell me."

This remark was prompted by the arrival of sunset once more, and Barlennan assured him that he would be kept informed. The captain had recovered his poise, and was once again more or less in control of the situation—as far as a prisoner could be.

The night was spent by the chief in discussion; his voice, interrupted occasionally by others which must belong to his counselors, came clearly to the Earthman far above. The ethnologist sit-

ting by Lackland had cut in a recorder, in the hope of making something of the language later on. Ethnology and philology had overlapped so thoroughly since the beginning of interstellar travel that it was no longer easy to distinguish between them. Lackland's opinion of his chances of interpreting the weird gabble was extremely low, but he realized his own lack of training in that direction might be giving him a false impression of the task's difficulty. He himself was listening for sounds that might indicate activity, and was more than glad when the sun reappeared without his having heard any. As nearly as he could tell from the screens—which did not, of course, give really complete coverage—everything was as it had been the evening before. Perhaps the warriors guarding the sailors were a little less attentive to their jobs, and the sailors themselves less tense; Lackland could not be sure, familiar as he had now become with their various bodily attitudes and "facial" expressions.

The chief had apparently reached a decision. He had drawn a little apart from his counselors and laid down his weapons; now, as sunlight slanted once more across the deck, he advanced toward Barlennan, waving the latter's guards away as he approached. The captain, already fairly sure in his mind what the other wanted, waited calmly. The chief halted with his head a few inches from Barlennan's paused impressively for a moment, and began to speak.

His words were still unintelligible to the sailors, naturally enough; but the gestures accompanying them were clear enough to give the speech meaning even to the distant human watchers. He waved repeatedly first at the nearest of the radios and then toward the bank; tapped the deck of the *Bree* with a pincer, and then pointed downstream. After each repetition of these signals with their accompanying verbal plea he would pause expectantly.

Quite plainly, he wanted a radio. Lackland found himself speculating idly on just what supernatural powers the chief supposed the device to possess. Perhaps he wanted it to protect the village from enemies, or to bring luck to

his hunters. It was unlikely to be a much more complicated wish; these people seemed to be on about the cultural plane of the nineteenth-century Fans or Bushmen. That was not really an important question, however; what mattered would be his attitude when the request was refused. That might possibly be rather antisocial, and Lackland was still worrying a trifle.

Barlennan, showing what his human friend felt was rather more courage than sense, answered the speech briefly; a single word and a gesture which Lackland had long since come to recognize comprised the reply. "No" was the first Mesklinite word which Lackland learned beyond doubt, and he learned it for the first time now. Barlennan was very definite.

The chief, to the relief of at least one watcher, did not take a belligerent attitude. Instead, he gave a brief order to his men. Several of these at once laid aside their weapons and began restoring the looted food to the lockers from which it had been taken. If freedom were not enough for one of the magic boxes, he was willing to pay more. Both Barlennan and Lackland more than suspected that the fellow was now afraid to use force, badly as his possessive instincts were aroused.

With half the food returned, the chief repeated his request; when it was refused as before, he gave an amazingly human gesture of resignation and ordered his men to restore the rest. Lackland was getting uneasy.

"What do you think he'll do when you refuse him now, Barl?" he asked softly. The chief looked at the box hopefully; perhaps it was arguing with its owner, ordering him to give his captor what he wanted.

"I'm not sure enough to venture a prediction," the Mesklinite replied. "With luck, he'll bring us more stuff from the village to add to the price; but I'm not sure luck goes that far. If the radio were less important, I'd give it to him now."

The ethnologist sitting beside Lackland practically exploded at this point: "Have you been going through all this rigmarole and risking your life and those

of your men just to hang onto a cheap vision set?"

"Hardly cheap," muttered Lackland. "They were designed to hold up at Mesklin's poles, under Mesklinite atmosphere, and through the handling of Mesklinite natives."

"Don't quibble!" snapped the student of cultures. "What are those sets down there for if not to get information? Give one to that savage! Where could it be better placed? And how could we observe the everyday life of a completely strange race better than through that eye? Charles, sometimes I wonder at you!"

"That will leave three in Barlennan's possession, of which one absolutely *must* get to the south pole. I see your point, Don, but I think we'd better get Rosten's approval before we actually leave one this early on the way."

"Why? What does he have to do with it? He's not risking anything like Barlennan, and doesn't care about watching that society like some of the rest of us. I say leave it; I'm sure Barlennan wants to leave it; and it seems to me that Barlennan has the final say in any case."

The captain, who had, of course, overheard this, cut in.

"You forget, friend of Charles, that the radios are not my property. Charles let me take them, at my suggestion to be sure, as a safety measure, so that at least one would reach its goal even though unavoidable incidents deprived me of the others. It seems to me that he, not I, is the one whose word should be final." Lackland answered instantly.

"Do as you think best, Barl. You are on the spot; you know your world and its people better than any of us can hope to; and if you do decide to leave one with these people, even that will do some good to my friends, as you have heard."

"Thank you, Charles." The captain's mind was made up in the instant the Flyer finished speaking. Fortunately the chief had listened enthralled to the conversation, making no attempt to further his own interests while it was going on; now Barlennan, keeping up the play to the end, called some of his crew and gave swift orders. Their recipients, as well as the other crew members who heard, had

difficulty suppressing their mirth, but they succeeded.

Moving very circumspectly and never touching a radio at any time, the sailors prepared a rope sling. Then they pried the set up from a "safe" distance with spears, and poked and pushed until the sling was in position under and around it. This accomplished, one of the sling handles was given very respectfully to Barlennan. He in turn gestured the chief closer, and with an air of handling something precious and fragile, handed the loop of rope to him. Then he gestured toward the counselors, and indicated that they should take the other handles. Several of them moved forward rather gingerly; the chief hastily designated three for the honor, and the others fell back.

"I thought he might assign four, and give himself the honor of lead-off man," Professor Don McKnight whispered in Lackland's ear. "I wonder whether they have different ideas of what constitutes the position of honor, or if the chief thinks he'll derive some mystical benefit from carrying the thing himself?"

Lackland shrugged his shoulders, having no means of answering this question. His interest was in Barlennan's activities, anyway.

Very slowly and carefully the bearers moved the radio to the edge of the *Bree's* outermost raft. The chief's canoe glided up—a long, narrow vessel evidently hollowed to a paper-thin shell from the trunk of one of the forest trees. McKnight looked it over with interest, as well as the single "eye" now pointing in the right direction would permit him; Barlennan viewed it with distrust. He himself had never sailed anything but a raft; hollow vessels of any kind were strange to him. He felt certain that the canoe was too small to carry the weight of the radio; and when the chief ordered the greater part of the crew out of it he barely suppressed the equivalent of a negative headshake. He felt that the lightening thus obtained would be insufficient. He was more than startled when the canoe, upon receiving its new freight, merely settled a trifle. For a few seconds he watched, expecting vessel and cargo to pop suddenly below the surface; but

nothing of the sort happened, and it became evident that nothing would.

Barlennan was an opportunist, as had been proved months ago by his unhesitating decision to associate with the visitor from Earth and learn his language. This was something new, and obviously worth learning about; if ships could be made that would carry so much more weight for their size, the knowledge was obviously vastly important to a maritime nation. The logical thing to do was to acquire one of the canoes.

As the chief and his three co-workers entered the craft, Barlennan followed. They delayed shoving off as they saw his approach, wondering what he might want. Barlennan himself knew what he wanted, but was not sure he could get away with what he planned to try. His people, however, had a proverb substantially identical in meaning with Earth's "Nothing ventured, nothing gained," and he was no coward.

Very carefully and respectfully he touched the radio, leaning across the half inch of open river surface between ship and canoe to do so. Then he spoke.

"Charles, I'm going to get this little ship if I have to come back and steal it. When I've finished talking, please answer—it doesn't matter what you say. I'm going to give these people the idea that the boat which carried the radio is too changed for ordinary use, and must take the radio's place on my deck. All right?"

"I was brought up to disapprove of racketeers—I'll translate that word for you some time—but I admire your nerve. Get away with it if you can, Barl, but please don't stick the neck you don't have out too far." He fell silent and watched the Mesklinite turn his few sentences to good account.

As before, he employed practically no spoken language; but his actions were reasonably intelligible even to the human beings, and clear as crystal to his erstwhile captors. First he inspected the canoe thoroughly, and plainly if reluctantly found it worthy. Then he waved away another canoe which had drifted close, and gestured several members of the river tribe who were still on the *Bree's* deck away to a safe distance. He picked up

a spear which one of the counselors had discarded to take up his new position, and made it clear that no one was to come within its length of the canoe.

Then he measured the canoe itself in spear lengths, took the weapon over to where the radio had been, and ostentatiously cleared away a spot large enough to take the craft; at his order, several of his own crew gently rearranged the remaining radios to make room for their new property. More persuasion might have been attempted, but sunset cut the activity short. The river dwellers did not wait out the night; when the sun returned, the canoe with the radio was yards away, already drawn up on shore.

Barlennan watched it with anxiety. Many of the other canoes had also landed, and only a few still drifted near the *Bree*. Many more natives had come to the edge of the bank and were looking over; but to Barlennan's intense satisfaction, none came any closer to the loaded canoe. He had apparently made some impression.

The chief and his helpers carefully unloaded their prize, the tribe maintaining its original distance. This was, incidentally, several times the spear's length demanded by Barlennan. Up the bank the radio went, the crowd opening wide to let it through and disappearing after it; and for long minutes there was no more activity. The *Bree* could easily have pushed out of her cage at this time, the crews of the few canoes remaining on the river showing little interest in what she did, but her captain did not give up that easily. He waited, eyes on the shore; and at long last a number of long black-and-red bodies appeared over the bank.

One of these proceeded toward the canoe; but Barlennan realized it was not the chief, and uttered a warning hoot. The native paused, and a brief discussion ensued, which terminated in a series of modulated calls fully as loud as any that Lackland had heard Barlennan utter. Moments later the chief appeared and went straight to the canoe; it was pushed off by two of the counselors who had helped carry the radio, and started at once toward the *Bree*. Another followed it at a respectful distance.

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MULTIFARIOUS

By ALGIS BUDRYS

THERE are certain stretches of southern New Jersey which, after the suction hoses and mucktreads of the cranberry picker have passed on, are rarely visited for the remainder of the year. It was into one of these bogs that Taj lowered his advanship, and it was at the brushy edge of a narrow path traversing such a bog that he encountered his first Earthman.

He had just scrambled up the bank with his collection pack and analyzer, and had started to part the bushes, when he heard a *ping!*, and a gentle voice said "Warning."

Taj spun back into the bog, hanging on to his equipment somehow, but going to his knees in the mud. Even while he was cursing his lack of foresight in not having kept his sidearm ready, the voice continued to speak.

"Warning. You are within the personal protection field of another individual. Kindly make yourself known to him." There was a rustling in the bushes, and Taj looked up to see an Earthman staring down at him.

"I'm damned," the Earthman said, scratching his thigh.

"I'm damned," Taj replied, suiting his form of address to the other's.

"Uh-uh, pal, you got that wrong. The usual form of greeting is 'Lo,'" the man answered. He scratched his thigh again. "You're not from Earth."

"No, I'm not," Taj said, inspecting the man, who was dressed in a set of extremely light coveralls, and wore a gracefully designed helmet.

"Hiking," the Earthman said. "Wouldn't be caught dead in more than my hat, ordinarily, but these mosquitoes aren't worth the trouble of maintaining a full strength field. Now come out of there. You look like you're praying to a cranberry bush."

Taj floundered out of the mud and climbed up the bank to the Earthman's side. "I am called Taj," he said, bringing his arm up from the elbow, palm outwards. The man shook his head.

"Name's Potter, Styles Potter," he said, extending his hand, the heel and little finger down, his fingers slightly curved, his thumb up. "That's how you say it, and this is what you do with your hand. Now take my hand firmly in yours."

"Name's Taj," Taj said, shaking Potter's hand. "Right?"

"Got a last name?"

"No."

"Right, then. How do you people tell one Taj from another?"

"We're all Taj. Aren't you all Styles Potter?"

Potter's lips pursed, and one of his eyebrows moved a bit. He hesitated before he answered. "No . . . not exactly, that is. We're all Styles, but we have different last names indicating our duties. Mine denotes a specialized ceramicist."

Taj considered this. "I've heard of that system. We ran across it on one or two worlds where different classes still intermingle. Our own cadres of specialists are kept isolated, and one's as good at his field as another, so there's no point to it for us."

"I can see that." The Earthman's glance flickered over the bog. "Don't see your ship, though. Got it hidden?"

"That's right. SOP for contact work. Not much point to that now. Care to see it?"

"Sure do. Never seen a spaceship."

"Come on, then." Taj started back into the bog.

"Wait a minute while I turn this field up a little, will you? No sense getting any muddier," Potter said. He reached up and touched the side of his helmet. "O.K. Stick close to me. This dingus broadcasts a yielding sphere that'll flatten out enough to walk on, even on mud, as long as I keep the intensity relatively low."

"Sounds handy," Taj said.

"It is. You can turn it up for rain, too. Wind, anything. Even mosquitoes, but that way, of course, you cut out any breeze that might come along, and any

smell it might be bringing with it. Hiking's no fun if you can't smell trees and bushes and stuff."

"You sound more like a naturalist than a ceramicist," Taj commented absently as he watched the shallow concavity in the mud that kept pace with their feet as they walked.

"Uh . . . yeah, I do, don't I? As a matter of fact, I sort of took a day off from the shop."

"Can't be a very stiff penalty, if you're willing to risk it on something as intrinsically purposeless as doing something outside your knowledge," Taj said curiously.

"It isn't—a day's pay doesn't amount to much in the pottery line."

"Pay?"

"Uh . . . in credits toward my retirement, of course." Taj noticed that the Earthman's expression had lost some of its self-possession during the last verbal exchange, but made no comment. His mind was racing as it assimilated the information Potter had unconsciously revealed in his speech and actions since they had met.

Item: For a world that showed no sign of spaceflight as one of its technological achievements, Earth had a remarkably advanced practical scientific culture.

Prime Evidence: Potter's helmet which was obviously not unique, and which had been demonstrated to possess the following attributes:

- (1) Protection for the wearer, in easily varied degrees.
 - (2) Automatic announcement of its wearer's presence, combined with a mild warning and an alarm to the wearer.
 - (3) An automatic translator—probably a vastly more compact version of the baSymbolic transpeaker—which allowed its wearer to enter into immediate verbal intercourse with any chance foreigner, even one so foreign as Taj.
- Syllogism One: Possession of this device will be of untold value to Taj. Potter has such a device. Therefore, it must be taken from him.

Syllogism Two: The value of this device, and of any further information regarding Terrestrial technology, together with any other samples of such techno-

logy, will be greatly enhanced if the Terrestrials remain unaware that they are in Taj hands. Potter has the two prime utile features of being both an excellent source of said information and samples, and of being the only Earthman as yet aware of Taj presence on this planet. Therefore, Potter must be questioned further, and then killed.

"Here we are," Taj said, stopping.

"O.K. Pick yourself something solid to stand on. I'll soften up the field so you can open the air lock," Potter replied, touching the side of his helmet once more.

Inwardly exultant over the series of coincidences that had provided him with such an excellent contact at the very outset of his mission, Taj unlocked the entrance hatch. "I'm afraid you'll have to cut off your field to get in here," he said to Potter.

"That's O.K.—I'm not that scared of the world that I've got to be armored all the time," Potter said, dropping through the hatch. "It's more or less of a habit, anyway. The hats sort of take the place of clothes in the cities." He touched his coveralls. "These'll be enough."

Taj carefully pulled the bushes and mud-covered mats back over the hatch before he closed it, then switched on the lights.

"Sounds like you've got an interesting culture," he said. "Women wear those helmets, too?"

"Certainly."

"Well, fair's fair, I guess," Taj said, leering. Potter looked at him uncomprehendingly.

Taj recovered rapidly. "How come I can still understand you with the field off?" he asked, though the answer was obvious.

"I only cut the protection screen off—Man, you don't think I'd be without my *hat*, do you?" Potter looked genuinely startled.

"Of course not. Hadn't thought of it, that's all."

Item: From Potter's reaction, it would seem that the entire culture was built around the helmets. Analysis of the properties of these devices will probably

enable us to collapse their civilization quite easily.

"Come on," Taj said. "I'll show you around."

"Good. I'd like that." Potter followed him into the engine compartment.

"That's the converter, over there," Taj said, pointing. "When we cut in or out of subspace, it channels the kinetic energy of our velocity into the warp generator, and gives us the necessary power to accomplish the shift." He turned his head to see Potter's face, and was surprised to see the Earthman smile when he asked, "You're familiar with the concept of subspace, of course?"

"Oh . . . uh . . . yes, yes, of course."

Taj frowned. Once again, behind Potter's obvious confusion, he thought he noticed something quite different. That smile, too. That didn't belong. There seemed to be a lot of inconsistencies in this avowed ceramicist-turned-holiday naturalist's character. Potter's next question served to becloud the issue even further.

"But, if you use your kinetic energy to shift from and to subspace, that would mean you'd have to build up velocity again every time you made the shift. Doesn't that take an awfully long time?"

If the question was meant to present a picture of a not unintelligent being who was nevertheless ignorant of the principles of spaceflight, then it served exactly that purpose. On the other hand, if it was a deliberate probe for information, then it was just as effective in that context. Taj decided to hedge.

"Inertiallevator," he said shortly.

"Oh," was Potter's answer.

Which covers a multitude of sins, Taj thought. Only the knowledge that he was in complete control of the situation as long as the helmet's field was off kept him from killing Potter immediately for caution's sake. He considered drawing his sidearm and operating on a captor-prisoner basis, but decided against that, too.

The strongest weapon is the opposition's failure to grasp the true situation, he remembered from his indoctrination. As long as he knew things about Potter

that the Earthman didn't know he knew, the situation was still under his control.

In any case, it was entirely probable that Potter was just as naive as he pretended to be. Taj's nerves had played tricks on him before.

"Well, look, Taj—I'm no physicist. All I'll ever get out of looking at a spaceship's engines will be the satisfaction of normal curiosity. That, I've done. How about showing me the rest of the ship?" Potter said.

"Sure, Styles, sure. Follow me," Taj said, his spirits rising in triumphant relief at Potter's obvious inability to understand the drive's workings. With the dissolution of the uncertain mood he had experienced in the engine room, he led the Earthman confidently into the control cabin, and showed him the fairly simple instrument board without misgivings. He even permitted himself to smile over Potter's awe of the celestial globe which did most of the actual work of pilotage.

The Earthman peered into the tank, his eyebrows drawn together. "This thing actually a scale model of the galaxy?" he asked.

Taj chuckled. "I'm afraid that would be a little beyond us," he said. "It's a model—but far from scale—of the sector of space we are capable of reaching. It shows all suns with worlds of practical value to us, though, of course, we couldn't and don't have to, reproduce the planets themselves."

"I'd say that was good enough," Potter commented in an impressed tone.

After a few more minutes of staring into the tank, he turned back to Taj. "I guess that about wraps up the grand tour, doesn't it? Let's find a place to sit down and talk."

"Certainly. Come on into the living quarters," Taj said, and led him into his cabin.

They found seats, Taj carefully picking a chair where his arm would be free to draw his gun whenever he decided that Potter had given him enough information. Potter lounged back in a padded seat.

"Nice layout—but then, with the traveling you do, I guess comfort's one of your main concerns."

"Naturally."

"That's all you do, isn't it, Taj? Just go on one contact mission after another."

"All you do is work with ceramics. I think my line's more exciting, personally," Taj shrugged. He began to feel a certain impatience with Potter's conversational trend.

"What's your world like?" Taj asked, hoping that bluntness would work better than simple waiting for the Earthman to drop hints in the course of normal speech.

"Oh, about the same as yours, I guess," Potter said casually. "Say—I'm hungry. You don't mind if I eat while we're talking, do you?"

Taj restrained an impulse to put a hand on his gun butt and inform the Earthman of the true situation. For some reason, Potter was reaching up toward his helmet.

"Well, I'm not so sure you should try eating Taj food before we know more about the metabolic differences," Taj said hastily, realizing at the same time that his hand was hovering at his side, halfway down to his holster. He moved it quickly to his knee and shot a rapid glance at Potter's expression.

The Earthman displayed no sign of having noticed the awkward movement of his arm. Rather, he smiled. "That's the reason I'm not offering you any of mine," he said. "Don't worry—I could have myself a banquet, if I wanted to."

Taj did not even attempt to unravel the various allusions of this remark, for the Earthman had reached up and removed his helmet. He held it between his hands and looked inside it, then reached in and withdrew several sealed packages. He opened one, took out something completely unrecognizable, and began to eat.

"Say, that's quite a trick," Taj said. "Looking at that helmet, you'd never know there was so much room inside it. That sure is one handy device."

"Sure is," Potter agreed, taking another bite of his sandwich. He ran a fingernail along one corner of a square box, flipped back a lid, and took a drink. "Don't know where we'd be without our hats."

Taj decided to take the bull by the horns. "Everybody has one, huh?"

"Everybody old enough to know how to use one properly, yeah," Potter said. "Whole culture's built around them."

"That so? You wouldn't mind telling me about it, would you? After all, I *am* supposed to be gathering information about you people."

"Sure. Glad to," Potter said. He leaned forward, the helmet resting on his lap.

"Look at it this way—what're the basic requirements for existence? Food—always, then shelter, in most climates, and clothing ditto. The easiest solution used to be that of building your house as close to the market place as possible, right? As your population grew, though, your market place had to get bigger and bigger, and you had less and less room for your house. You wound up living in a sort of heap, with your neighbor's nose over your shoulder, and the competition at the market place getting rougher and rougher.

"All right. Now, you could reach a temporary solution by finding new market places, or building them in likely spots. But the more market places you had, the more room there was for people, so, in a generation or two, there you were, right back with your neighbor's breath on your neck.

"So they tried something else. They spread the shelters all over the world, and started bringing in products directly from the source to your door. This meant transportation, and fast and cheap, too. Combined with improved methods of storage, so that you could lay in a big supply of necessities at one time, this worked pretty well, until the population grew again, to the point where your transportation media were clogging up every clear bit of traffic lane, and your neighbors were right back in your lap again, even if you lived in what used to be a desert area.

"About this time, your sources were feeling the strain, too. So, they tried spaceflight—oh yeah, we eventually touched every habitable spot in the solar system. The trouble there lay in your definition of 'habitable.' You can't do much in the way of a culture if it's confined to a pressure dome, and spends five

dollars in maintenance and special equipment for every three it gets back in products from an terrestrial environment.

"So, they were about to try interstellar flight when some bright boy came up with a simpler solution. He figured out a way to get rid of two of the three basics—clothing and shelter—combined with a system of food distribution that cut the transportation problem down to a matter of supplying one central location, which, in turn, supplies every individual. In other words, the helmets.

"With all the old facilities that produced clothes and houses now abandoned, there's lots of room, time, and labor, for food production.

"Funny thing, too. When we junked our old transportation system, life became a lot more fun. It sort of slowed down, you might say, and we all got a chance to look at the scenery. Not just the countryside—all kinds of scenery. Art forms, philosophy—all the gentler pastimes. Once you didn't have to beat your neighbor off with a club, and then run like hell to get to the store before he did, you had a chance to relax and take a couple of deep breaths."

Taj considered this. Somewhere in Potter's description, his subconscious had spotted a flaw, but hadn't been able to resolve it into sufficient coherence to enable him to put his finger on it. He looked at Potter. Perhaps, if he launched into what would be an almost automatic description of his own culture, he'd think of it in the meantime.

"Sounds interesting," he said. "Our solution to the same problem was very different. Perhaps not as good as yours." He realized with a perceptible shock that he actually meant that.

Potter smiled. "I know. I figured that out within the first few minutes. Suppose I tell you?"

And how do you like *that*? Taj thought. I've been pumping him, but he knows enough to tell me about my own culture. "Go ahead," he said, unable to keep the disbelief out of his voice.

"O.K. In the first place, you landed your ship where it wouldn't have been spotted ninety-nine times out of a hundred. In the second place, you tried to

hide from me. The obvious conclusion is that you wanted to know all you could about us, but didn't want us to get wise to you. That's a sign of a fiercely competitive attitude.

"Again, you're all named Taj. It's the same as if all of us were called 'Man.'" Potter smiled again. "I'm afraid I lied to you—that was when I first started putting two and two together. And, when you showed surprise that I'd taken a day off, that I was getting paid for my work, and that I was interested in and appreciative of something completely out of my supposed line, that clinched it. It became pretty evident that things are tough in your culture. There's no individuality, and all your efforts are confined to one narrow line of endeavor, which, when integrated with the efforts of other extreme specialists, serves to promote the well-being of your culture.

"There's the difference—you work for your culture. We work for the individual.

"Well, after I'd put all that together, it became pretty easy to extrapolate. Obviously, you had the same problems we did, but you never discovered the helmets. So you took the faulty solution, which is really no solution. You just expanded your civilization to include numerous stars, thereby postponing the inevitable, but not obviating it.

"Tell me, Taj, what did you figure on doing after your interstellar empire outgrew your technology's ability to sustain it?"

"I don't know," Taj answered, half his mind still on the problem of the flaw in Potter's statements about the helmet culture. "I never thought about it."

"Of course not—it's out of your line. You were trained for just one thing—contact work. There's the difference between us as individuals. You've got a rigid set of rules which probably work very well, as long as you stick to your line. Even then, you're stuck if you have to operate on any basis except competition."

"I don't think that's true."

Potter smiled again. "Oh, no? You mean you weren't going to kill me for my helmet?"

HER HIGHNESS

JOAN THE WAD

314, JOAN'S COTTAGE,
LANIVET, BODMIN,
CORNWALL

"Two weeks ago I bought a 'Joan the Wad' and to-day I have won 2000 lbs. Please send two more."
R.G., Tredegar, S. Wales.—Extract from "Everybody's Fortune Book, 1921."

JOAN THE WAD

SEND
NOW



HURRY

GUARANTEED DIPPED IN WATER
FROM THE LUCKY SAINTS' WELL

is the LUCKY CORNISH
PISKEY who Sees All, Hears
All, Does All. JOAN THE WAD
is Queen of the Lucky Cornish
Plaques. Thousands of persons
all over the world claim that
Joan the Wad has brought them
Wonderful Luck in the way of
Health, Wealth and Happiness.
HISTORY FREE FOR A STAMP
If you will send me your name
and address, a 1/- stamp and a
stamped addressed envelope for
reply, I will send you a history
of the Cornish Plaques, and
the marvellous miracles they
accomplish. JOAN THE WAD
is the Queen of the Lucky Cornish
Plaques and with whom
good luck and good health
always attend.

AS HEALER

One lady writes: "My sister suffered very badly for years, but since I gave her a 'Joan the Wad' to keep near her she is much easier. Do you think this is due to Joan or the Water from the Lucky Well?"

AS LUCK BRINGER

Another writes: "Since the War my wife and I have been dogged by persistent ill-luck, and we seemed to be sinking lower and lower. One day someone sent us a 'Joan the Wad.' We have never found out who it was, but, coincidence if you like, within a week I got a much better job, and my wife had some money left her. Since then we have never looked back, and, needless to say, swear by 'Queen Joan'."

AS MATCHMAKER

A young girl wrote to inform me that she had had scores of boy friends, but it was not until she had visited Cornwall and taken Joan back with her that she met the boy of her dreams, and as they got better acquainted she discovered he also has "Joan the Wad."

AS PRIZEWINNER

A young man wrote us only last week: "For two years I entered competitions without luck, but since getting 'Joan the Wad' I have frequently been successful although I have not won a big prize, but I know that —, who won £2,000 in a competition, has one because I gave it to him. When he won his £2,000 he gave me £100 for myself, so you see I have cause to bless 'Queen Joan'."

AS SPECULATOR

A man writes: "I had some shares that for several years I couldn't give away. They were 1/- shares, and all of a sudden they went up in the market to 7/9. I happened to be staring at 'Joan the Wad.' Pure imagination, you may say, but I thought I saw her wink approvingly. I sold out, reinvested the money at greater profit and have prospered ever since."

JOAN THE WAD'S achievements are unique. Never before was such a record placed before the public. Ask yourself if you have ever heard before of anything so stupendous. You have not. Results are what count, and these few Extracts from actual letters are typical of the many hundreds that are received, and from which we shall publish selections from time to time. We unreservedly GUARANTEE that these letters were absolutely spontaneous, and the originals are open to inspection at JOAN'S COTTAGE. Send at once for full information about this PROVED Luck Bringer. You, too, may benefit in Health, Wealth and Happiness to an amazing extent.

All you have to do is to send 1/- stamp (savings stamps accepted) and a stamped addressed envelope for the history to

314, JOAN'S COTTAGE, LANIVET, BODMIN, CORNWALL

For Canada and U.S.A., send 50 cents for History, or \$2 for both History and Mascot.
For Australia, South Africa, New Zealand, Rhodesia, Barbados and other Colonies, send
1s. 6d. for History, or 8s. 0d. for both History and Mascot.

"All right, Potter." Taj pointed his sidearm at the Earthman.

"Relax, Taj. You want it? Take it. In fact, we'll provide you with specifications, and you can manufacture your own. Say the word, and we'll broadcast them right to your home world."

Taj's gun wavered. "Why? What's in it for you?"

"See what I mean? No comprehension of a non-competitive attitude. Simple. You want to take over our planet. You couldn't do it, but that's beside the point. What isn't, though, is the fact that your culture is butting its head against a stone wall. It's painful to watch, so we're going to show you how to get around the wall."

"That's twice you've said 'we.' Meaning all Earthmen, I presume. Where do you get the right to speak for them?"

"Helmets are wonderful things, like I said. I've been in communication with our Population Vote center for the last two hours. A majority of Earthmen have already voted to give you the specifications."

"I don't believe you."

"Put the helmet on. Listen in." Potter tossed the helmet into the chair. "Go ahead. You can do it with one hand while you keep your gun on me."

Gingerly, Taj put the helmet on. He listened to the dry running count of the votes for a moment, then took the helmet off again.

"Two billion—!" he said in an awed voice.

Potter nodded. "And mighty few against."

"I don't believe you."

"You said that before. You're right, though. I might be lying, and the count could be fudged. I'm not, and it isn't—lying's a competitive trait, but you'd have to break down all your conditioning before you could convince yourself of that."

At this moment, Taj finally got it. The gun steadied in his hand.

"I just put two and two together. Item: Your solution of the transportation problem. Item: Your reference to 'broadcasting' the helmet specifications to my

home world. Add to that the manner in which you pulled your lunch out of your hat." He cursed. "You've got matter transmitters!"

"Right. Potter grinned. "Surprise, surprise. I let you figure that one out for yourself. Now do you realize we're making an honest offer?"

"I do *not*." His finger took up the tension on the stud.

"Man, I could have killed you in a particularly revolting manner, just a minute ago. If I were trying anything, I would have."

"That's a lie. You're weaponless."

"You were wearing my helmet," Potter said quietly.

"What about it?"

"I just ate lunch out of it, right?"

"So?"

"There's a definite cycle built into the operation of eating, isn't there? Particularly when you have containers to dispose of? The helmet's built to take care of it automatically. Some of the controls are manual. This one happens to be on voice."

"Which means?"

Potter picked up the wrappings from his lunch and tossed them into the helmet. "Garbage disposal," he said in a monotone.

Taj stared. The wrappings fell through the bottom of the helmet and disappeared.

"That could have been my head!"

"Exactly. Now do you trust us?"

"I don't know. I—How do I know you didn't let me live so you could find out where my home world is? Sure," he said desperately, "that's the answer!"

"Don't be stupid. It's marked in red in your celestial globe."

"I . . . I still don't know whether or not to believe you," Taj said, his mind, laboring on a completely unaccustomed track, wavering.

Potter stepped forward and took the gun out of his hand. "I don't expect you to. But your kids will," he said. "Come on—let's get out of this swamp. There's a car coming to pick us up." He smiled again.

"You can wear my helmet, if you like."

LADY WITH A PAST

By IRVING E. COX, Jr.

FOR a moment there was a shadow across the setting sun, a black shaft plunging toward the heart of the new forest. Peter Hallen sprang to the rail of his Watch House, waiting for the sound of the crash. Minutes passed and he heard nothing.

It was his last day of annual Service Duty, and he wanted no flash fires to mar his record. He jerked on his plastic emergency jacket. Beneath it he wore jodhpurs of the same material; his boots, too, were plastic, as light and pliable as silk and as tough as Marsmetal.

He ran down the stairway and sprang into his two-seated turbocar. In a spray of splattered gravel, he spun off the paved highway into the twisting, dirt road that led to the new forest.

The redwoods of both sides of the road towered tall and straight from an uncluttered floor of soft, black loam, each tree an equal distance from its neighbors. The new forest was a rectangle of a thousand acres which had been recently cut. The roots of the giants had been ripped out of the earth and rows of year-old saplings planted in the rich soil. Most of the work had been done during Hallen's period of Service Duty, and he was immensely proud of it.

He pulled his turbocar to a stop beside the clearing and ran up the steps of the emergency watchpost. Half a mile from the road he saw a thin plume of smoke rising toward the dusk-red sky, but whatever it was had nearly burned itself out. None the less, it was necessary to extinguish any smoldering debris that might still lie on the earth.

Slipping two of the chemical bombs into his pocket, Hallen moved off through the saplings toward the dying ribbon of smoke. He was a large man, chunkily built, with a suggestion of primitive savagery in his walk and in the flat, massive bones of his face. His hair was black and thick, lying tightly curled against his skull; yet, in spite of the impression that he gave of untamed brute strength, his slanting blue eyes were alert and intelli-

gent, his hands almost poetically delicate.

Since he did not have sufficient data, he made no attempt to guess what had fallen in the forest. It could have been a Stratocargo robot, an Asia Transport, or one of the Venusian pioneer expedition rockets. If so, it was a unique disaster. Hallen was twenty-five years old and, in his lifetime, he had never heard of the crash of any aircraft. The last disaster had been a century before, when a robot carrier had fallen in Tibet; but it had been an old model not equipped with the safety automatics.

It was dark when Hallen reached the site of the fire. The smoke was gone, the ground already cool. A score of saplings was crushed and burned in an ovoid pattern, which surrounded a long, shallow depression in the earth. It was coated with a gray-green film, like the waste dust that periodically choked the exhaust vents of the city power plants.

The only ready explanation that occurred to him was that a meteorite had fallen. As a precautionary measure, he broke two bombs over the waste and jumped back as the thick, white cloud spread over the ground. Behind him he heard a labored gasp, and a sharp crack as a young sapling was broken at the roots.

Angry at such heedless desecration of young trees, he ran toward the sound. He caught a glimpse of a crude, robelike costume as a muffled figure fled from him. He followed easily. In a small turn-around clearing beside the road, Hallen came face to face with the stranger. For a split second he glared at Hallen, beady eyes blazing with terror in a small, white face. Then, ludicrously, he launched himself in the air, springing upward as if he wore wings.

Screaming, his body twisting violently, the stranger followed the proscribed laws of physics. His head hit the ground and he lay moaning painfully. It was only when Hallen bent over him and pulled back the hood of the robe that he discovered the stranger was a woman. She

was very small and beautiful, her skin so white it seemed transparent.

"I forgot about the gravity," she whispered.

"You mean you actually expected to fly?" He bent to examine the bruise on her forehead. She pulled away, screaming again as he picked her up and carried her to his turbocar.

"I've a wound kit at the Watch House," he assured her. "I'll have that bruise—"

"No! Please, leave me here!" She fingered the edge of his car, and glanced up at the overhang of rocks above the road. "But your car's blue, and—"

"Obviously."

"... And this is the right place!" Very slowly she asked, "Is the weather fine?"

"For all it matters right now, it might snow before morning."

"Snow before morning! That's it. Everything's right, after all." She held out her hand. "My name is Diane Landers."

After a moment he gathered that her odd gesture was a form of greeting. He extended his hand, too, since she seemed to expect it. She grasped his fingers briefly and shook them.

"I'm Pete Hallen," he said. "On Forest Duty in this sector."

"That gave you a convenient excuse, didn't it?" Her voice was abruptly calm. "You won't need to take me to the city for nine or ten hours, Mr. Hallen. The transmissions won't begin until dawn."

He laughed. "Now, that's right considerate of you, Miss Landers, since I have no intention of leaving until my replacement comes. If you don't mind, answer one question for me: What are you doing here?"

Her eyes widened. "Why, I came here to meet you."

"You don't know me!"

"Of course not. Why should I?"

It was at that point that he began to wonder if she were sane. He slid behind the wheel and turned the switch; the turbine began to hum quietly. The woman studied the complex controls with a curiously frightened expression.

"Your surface-car, Mr. Hallen—what kind of power does it use?"

"It's no different from any of the

others. Regulation steam turbine drive; atom-pile unit, renewable every six months."

"You built it yourself?"

"I did a tour in a Fab Plant, if that's what you mean."

"It seems—strange. There was nothing in the prognosis about machines."

"Prognosis?"

"But of course the overall picture remains the same." She settled deep against the cushions, twisting her hands together in her lap. For a long time she studied the pattern of redwoods that lined the road. "It's not what I expected," she said at last. "The forest should be tangled with shrubs and dead branches."

"You're thinking of the game preserves farther up in the Sierras. This is part of the International Tree Plantation."

"Oh."

She seemed puzzled, so he added, by way of explanation, "You know, the forest land we restored as a conservation measure. Now we're cutting for export and reforestation as we go."

"It . . . it's wrong!" Her quiet whisper was tense with fear. When he tried to talk to her again, she ignored him. She said nothing until the little car ground to a stop before Hallen's Watch House. She looked up appraisingly at the thick, log walls; what she saw seemed to satisfy her.

"Typical primitive," she decided.

"My cabin? Now that is something I built for myself. From start to finish in less than—"

She grasped his hand impulsively. "You poor man!" Then, brightening, she added, "But everything's going to be better shortly. I promise you that."

She walked up the long flight of steps ahead of him, but before she came to the top she fell against the porch railing, gasping for breath. He reached out to catch her. As his arm encircled her waist he felt, instead of the pliant curves of a woman's body, a band of ridged metal bars concealed beneath her robe. Frantically she jerked away from him.

"Don't touch me!"

He shrugged noncommittally and went into the cabin, the autolights blazing up as he passed through the door. Certainly

she was mad, a fugitive from the isolation sanitarium in the forest. When he saw her in the light, Hallen fully expected to find the tiny "I" tattooed on the lobe of her ear. It was the mark of the incurably insane, legally barring them from marriage. Hallen felt a slight twinge of regret, for he had found Diane Landers attractive, in her fragile way. And he had already decided he liked her.

He was, therefore, agreeably surprised to see that her lobe was clean. She was as sound of mind as he was himself. She leaned against the door jamb staring at him, while a wave of pity welled into her face. "Well—it's almost over."

He backed away from her. "Now, wait a minute! Let's start getting a few things straight. Nothing you've said makes sense. I don't know who you are, or what you're doing in the Plantation. I saw a meteorite fall in the new forest, and when I—"

"Only a meteorite?" Her eyes widened in terror. "But your surface-car is blue and you were on the road at the exact spot where—" She gasped. "Mr. Hallen, are you a Linkist?"

He began to laugh. The Linkists were an exotic splinter sect, amusingly harmless. In their badly printed tracts they were alternately threatening to overthrow world civilization and loudly lamenting their imagined persecution as an unprotected minority. Vaguely Hallen knew the Linkists pretended to believe the legend about the great ones who had fled during the Suicide War; the Linkists confidently expected, one day, to find their survivors.

"So that's what you're afraid of," he said. "No, Miss Landers, I'm just as normal as you are." He took a transparent capsule out of a wall wound kit and broke it in his palm, applying the cool gelatine to the bruise on her forehead. "We both seem to have gotten off to a side-rocket start. I took you for one kind of an idiot, and you took me for another. You're from the lodge, aren't you?"

"Lodge?"

"The hotel up on the lake. People are always wandering off to look at the trees, and getting lost. No point going back now. I'll drive you over in the morning,

on my way back to the city. This is my last night of Service Duty."

"Mr. Hallen, I—"

"Call me Pete."

"But I don't know you!"

"You will," he grinned.

"I must go, Mr. Hallen . . . Pete." Her voice had the patient, patronizing tone of a mother addressing a little boy. "Thanks for all you've done, but you . . . you just wouldn't understand."

"Understand what?"

"Pete, I've made a mistake. When I saw the kind of a machine you drove, and the way the trees were planted, I began to wonder if the prognosis was wrong." Tears gleamed in her eyes, "I said you wouldn't understand, Pete."

Suddenly the folds of her robe shifted and he saw a weapon gleaming in her hand. It was a primitive gun, a museum piece three or four centuries old. Hallen was shocked; to bear arms was on a social level with refusing to perform a Service Duty. Once again his eyes searched the lobe of her ear for the telltale brand.

"Stay where you are, Pete." She backed toward the door.

"Diane! You can't leave here carrying that thing. Give it to me and I'll get rid of it for you." He moved toward her; she raised the gun. He did not believe she would pull the trigger until the explosion echoed through the cabin and the sudden flaming pain stabbed into the flesh of his arm.

In the nightmare of dizziness, he staggered and fell. He heard her feet on the steps, and the hum of his turbo car as she drove it toward the highway. As the undulating blackness moved around him, he had the presence of mind to reach for one of the gelatine capsules and break it over the wound in his arm.

The relief from pain was immediate and in less than a minute his head had cleared. He examined the wound critically. The bullet had broken cleanly through the flesh, burying itself in the cabin wall. Hallen worked a synthacell strip into the wound, sealing it with another gelatine capsule.

Then he went about the business of winding up his tour of Duty in the Forest Service. He set the automatic fire

control on his sector of the Plantation and completed the recapitulation of statistics on the cutting and planting which had been done under his supervision. Only after he had pulled off his plastic jodhpurs and relaxed on the bed did he begin to consider the problem of Diane.

Immediate pursuit did not occur to him. It was his job to stay on duty in the Watch House until his replacement arrived. If a situation seemed to him to be an emergency, he could have suspended his allegiance to duty. But his brief encounter with Diane had given him no data for such a conclusion. For the same reason, he did not send in a general alarm.

Now, he considered the facts that he had about her. Certainly her behavior was unusual; he could not apply a more specific adjective.

Yet she was sane, since the lobe of her ear was unmarked. For more than a century, the Medical Service had been able to identify the incurables and withdraw them from society before they reached the age of five. Generation by generation, the number had diminished to the vanishing point. Out of a world population of more than three billion, only a fraction of one per cent was still isolated in the institutions. After half a millennium, the effect of the radiation unleashed during the Suicide War had been very nearly wiped out.

Then, since Diane had a rational mind, the nonsense she talked must have made sense. On the surface, that seemed absurd. She carried a gun: quite seriously she assumed that he was a Linkist; and she resorted to both emotion and violence to solve a problem.

Hallen picked over the details of their conversation. It was not a difficult thing for him to do. His mind was uncluttered with warring emotion or insatiable frustration. Nurtured by the precision of a psycho-mathematical society, his memory functioned with the unbiased exactness of a mechanical calculator.

When he first saw Diane, she had literally tried to leap off the surface of the earth; she had said she forgot about gravity. Such a comment suggested that

she was physically acclimated to conditions of space flight and temporarily unadjusted to planetary gravity. Her breathlessness after climbing the Watch House steps argued the same hypothesis.

It was possible, Hallen supposed. For two centuries ships from Earth had explored both Mars and Venus. Millions of tons of rich, Venusian soil had been brought back to restore the deserts burned into the earth during the Suicide War. Ore from Mars built the city power plants, the continental networks of distrotubes, the rocket jackets for the Strato-cargo robots. If Diane had been among the personnel of a Venusian expedition, the meteorite Hallen had seen had been a space rocket. But, if such a ship had destroyed itself, how could Diane have survived alone?

At last Hallen's hypothesis made sense.

He sprang up, clenching his fists, angry because he had made no attempt to stop her. He had allowed her to plunge blindly into chaos!

He remembered her reaction when she first saw his turbocar. She had mistaken him for someone else who had obviously intended to meet her in the new forest. Of course it would be a Linkist. She would have returned to the new forest road, now, to wait for the right man. If Hallen could find her first, he could still save her.

He jerked on his jodhpurs and boots and ran down the Watch House steps. It was a moonless night, but Hallen knew the forest well enough to take a short cut through the redwoods. He was whistling tunelessly and, after a moment, he recognized it as the folk-melody of "The Ballad of Alamagordo," with its vicious refrain,

*For man, we made atomic fire to break
the mists of space.*

*He scorned our words and used our
strength to kill the human race.*

*And so we leave your shattered cities,
torn and stark with pain.*

*Destroy yourselves! But save this hope:
someday we come again.*

It was a long, rambling epic, preserved in several variants in the national gallery. Considered one of the more typical relics

of the Transition, it was reprinted in all the anthologies; generations of students were forced to wade through the complexities of the archaic language.

The ballad also symbolized the legend of the Linkists. For the first time, Hallen got the point.

As he emerged from a ravine beside the new forest road, he saw his turbo-car in the shadows beneath the overhang of rock; a second car had just pulled to a stop beside it.

Hallen ran frantically toward them. Diane saw him and screamed. In her haste to climb into the second car, she caught her robe. As it jerked free from her shoulders, the band of metal cylinders bound to her waist was ripped loose, spilling over the gravel.

She scrambled to retrieve them, while the man who had come to meet her fired one of the ancient weapons at Hallen. The bullets spattered the road and Hallen was forced to take cover in the ditch. A second later, Diane sprang into the second turbocar and it roared away in the darkness. Hallen ran to his own car, intending to follow, but he found that Diane had smashed the fuel tube. The repairs could be easily made, but they were time consuming. As he slid beneath the turbine unit, he saw one of Diane's cylinder's lying under the car.

He examined it carefully. Eight inches long, it was made of crudely machined iron. At one end was a square, grid-protected disk, a receptor of a relatively primitive design, built to receive and amplify microwave impulses transmitted over a vast distance.

"The transmissions won't begin until dawn," she had said.

Hallen, then, had until dawn to save her.

It took him more than an hour to repair the fuel tube. Afterward he drove back to the Watch House long enough to alert the Central Watch Station for emergency relief. In any case, his tour of Service Duty would end when his regular replacement came in the morning. He changed into the brief, skin-tight leisure clothes which he would wear for the next six months until his turn came again for another half year's Service Duty.

Hallen drove out of the Tree Plantation and took the broad highway to the city. Surfaced with a gray alloy made from Martian metals, the road glowed softly in the darkness. On both sides of it were the curving roofs of the distro-tubes, which lay on the continent like a network of giant, metal tentacles. Through the complex inner coils, the tubes distributed raw materials and fabricated goods to the consuming-producing units with a speed approximating that of sound. As a result, manufacturing centers were small and widely scattered. A man could perform any choice of Service Duties in his own community, and sometimes within his own home.

No metropolis, therefore, existed; but the old names carried over. The sixty comfortable villages clustered around the bay were always referred to as "the city" and there was no other close union of towns quite like it on the face of the earth. Built on the sites of San Francisco, Berkeley and Oakland, the sixty shared a common name, Moreville; for it was there that the new civilization had begun, and Moreville still served as the symbolic world capital.

What centralized government there was met irregularly in Moreville. Logically the aggregate of towns had been Diane's destination. She could not have visualized or conceived the integrated civilization sprawling over every continent. In a sense, she was unable to see man for the trees.

Although each of the sixty villages was small, Hallen had no illusion that it would be easy to locate her. And it was four hours before dawn when his turbo-car rolled into the bayside town where he lived. Like all the others, it was a clean, self-sufficient, machine-serviced community of rambling dormitories and individual dwellings. The heart of the village always was the recreation building, flanked on one side by the community eating hall and on the other by the stately towers of the learning center.

The Linkist strength, such as it was, was concentrated in Moreville. They would take any means to conceal Diane, Hallen knew, for she could prove their case. That doing so might destroy her

own personality would never occur to them. Afterwards, when they saw what happened, they would be sorry and ashamed; but contrition did nothing to restore an individual.

Hallen had an elderly great aunt who had recently taken up Linkism, since her sight was too poor for reading and her body too age-fragile for any other form of recreation. After five minutes of pounding on her door, he aroused her and forced his way into her room.

"Pete!" she cried in alarm. "You shouldn't be home tonight! Your tour isn't over until morning!"

"Emergency, Aunt May. I want to know where the Linkists meet."

"Why? So you can bring your friends to laugh at us?"

"We're not playing games tonight. I'm Pete Hallen, remember? I've known you all my life; I know your mind's as logical as mine."

"Very well, Pete; so it's just a game." She squared her thin shoulders angrily. "It happens that I like Linkism."

"The Linkists think they'll contact the others sometime, isn't that it? Those deserters who ran away when—"

"Not deserters. They were the greatest minds in the world."

"Perhaps—more than five hundred years ago. What happens, Aunt May, if there are any survivors?"

"That's purely theoretical, Pete. You know as well as I do—"

"Survivors from an isolated community, inbred for generations, separated from their own species for half a thousand years?"

"Pete!"

"No, it isn't quite that bad, Aunt May. Biological evolution moves more slowly."

"But I just remembered! One of the men up in Village Forty-three, on the north shore, is supposed to have made some sort of microwave contact with them. Months ago. I haven't heard him tell it himself, but there are all sorts of rumors."

"He succeeded, Aunt May. He's brought one of them here. A woman whose concept of our world was built on data from the Suicide War period. In point of time, a universe stands between

us. When she has to face that, her whole logical integration will be threatened. I have until dawn to find her."

"You're sure? There actually is a woman here from . . . from wherever it is?"

"Diane Landers. She landed in the Plantation."

"Why dawn, Pete?"

"She brought some sort of a primitive receptor with her. I suppose it is meant to subjugate us, somehow; to make us harmless so the others can come back safely."

"And when it doesn't . . . oh, the poor child!" Aunt May pulled a soft, furlined cloak around her shoulders and pushed her feet into brightly colored plastic boots. "When the Linkists have a general meeting," she explained, "it's in an old Fab shop on the other side of the bay. He's taken her there, of course. I'm going with you, Pete. She may adjust more easily if a woman talks to her."

Bridges spanned the bay at nearly the same places where they had previous to the Suicide War, or so Hallen's teacher in Cultural Archeology had once assured him. But the structures were very different; each was a single span of unsupported metal, built in a graceful curve close to the water.

In his blue turbocar, Hallen and his Aunt May crossed to the point of the peninsula, known locally as the San Francisco Landing. Left a naked, sterile desert after the Suicide War, the point had been converted into one of the five world spaceports. Beyond the vast area dominated by the gigantic launching frames was a fringe of low-roofed fabrication shops.

Hallen left his turbocar beside the field. As he followed his aunt toward the row of shops, the first gray light of dawn washed over the night sky. Silhouetted against the bank of clouds was the sharp nose of a Venusian rocket, lying in the skeletal launching frame while humming, robot-brained machines pumped activated fuel into the power tubes. Stacks of supplies piled on the field indicated that the expedition would blast within three or four hours, but at the moment the port was deserted.

* That there were no men on the field was a customary condition, entirely normal. To have found guards protecting the heaps of equipment would have struck Hallen as fantastic. Equally improbable was the idea that men might have had to work through the night to have the rocket ready for a morning launching. Machines were the routinists, the labor slaves; not the men who made them.

Aunt May led Hallen more than half a mile across the metal surfaced field to a fabrication shop where the autolights glowed dimly behind sheltered windows. Since the lights were on, someone was obviously inside; yet, as they opened the door, they heard no sound.

In the entry hall there was a litter of torn, red cardboard on the floor. Aunt May pieced two of the fragments together. She looked up at Hallen, an uncomfortable frown on her face.

"Membership cards," she said. "Some of the Linkists have been here, Pete."

"And they're gone now?"

"Furthermore, they've thrown their cards away. It's happened, Pete—the way you thought it might. They're ashamed of what they've done to her, and they're trying to run away!"

She hurried through the inner door into the shop. Hallen followed. An elderly man lay on the floor beside an overturned lathe. His hand was clenched on a bleeding wound in his side, and his lips were working in soundless, helpless torment.

"It's the man from Village Forty-three." Aunt May bent over him, lifting his head. Hallen found an emergency wound kit, and broke a gelatine capsule in the wound. The old man smiled gratefully.

"I couldn't make it myself," he whispered.

Methodically Hallen worked a synthacell strip into the wound as the bleeding stopped. "What happened?" he demanded.

The old man sat up. The pain drained slowly from his face. "You're the Forest Service man I shot at, aren't you?" he asked. "Sorry; she gave me a thing and told me to use it. I was a fool."

"We all were," Aunt May put in. She fumbled in the pocket of her cloak and

took out a red card, tearing it grimly into shreds.

"It's odd," the old man said. "All the others did exactly that. We enjoyed being Linkists, until we found out we were right."

"Where's the girl now?" Hallen asked.

"Diane Landers? I don't know. At first she thought we were savages. When I drove her through the city she asked all sorts of questions about it—about us. I couldn't understand her reactions. She seemed surprised and pleased, and frightened at the same time."

"What happened after you brought her here?"

"The sight of the Landing bewildered her."

"But she accepted it—the idea that we're exploring the planets?"

"She kept saying repeatedly that she couldn't go through with it. So much fuss seemed just plain nonsense to me. All I wanted her to do was prove our point for us. We were right, after all; the others have survived! There actually is an existing link with the past. I called the key Linkists as soon as Miss Landers and I reached the shop. But she wouldn't talk to them about herself. She asked all sorts of questions about the spaceport, and the Venusian rocket on the field. And she kept clutching those childish receptors she had brought with her, and telling us what a wonderful world we had made out of the wreckage."

Hallen gnawed thoughtfully on his lower lip. "But if she adjusted to the idea that her original premise was wrong—"

"Suddenly she began screaming at us; she had a foolish notion she was doing us harm. We tried to reason with her, but she simply didn't understand logic in a separate context from emotion. She wanted to leave. When she threatened us with her gun, there was pandemonium. Everyone began to run away. I tried to calm her down, because I'm more responsible than anyone else for her being here. I made contact with them six months ago, and I arranged for her mission. In the confusion she shot me, but I'm very sure—"

"The Venusian rocket!" Hallen broke

in. "Her thinking is logical; it always was. She's simply the go-between. She has no idea what her receptors will do, and she doesn't want to harm us!"

He ran out of the shop and stood, for a moment, looking out over the space-field. The sky was brighter, streaked with glowing orange. Dawn was her deadline, and she was still driven blindly by her own frame of reference. Hallen saw her, lurching half-crouched toward the open port of the rocket.

He caught up with her quickly. She was still fighting her inability to move easily in Earth's field of gravity. It had taken her more than an hour to negotiate the half mile across the field from the shop to the rocket. When she turned to face Hallen at the foot of the rocket ramp, she was gasping hysterically for breath and her face was drawn with exhaustion.

"No, Pete!" she cried hoarsely. "Let me go!"

As she fumbled for her gun, his arms encircled her, pinning her hands to her sides. She struggled weakly.

"Pete, I have to get away before the transmission begins!"

He reached beneath her robe and jerked away the band of metal cylinders. "These things are harmless, Diane."

"No, they're not, Pete! They were built to destroy you!"

"How?"

"The Director told me to put them at different places in your city and—"

"But there are millions of villages like ours. How could you destroy them all with a handful of gadgets?"

"We didn't know that, Pete; the only city we could observe was this one." She glanced up at the brightening sky. "But it doesn't matter how they work, Pete. For centuries we've waited for a chance to come back and rule Earth."

"Why so long?"

"It took all our manpower at first to build Magordo and keep it functioning; generations spent just keeping alive. It wasn't until twenty years ago that we were organized enough to begin experimenting with space flight again."

"Just what do you think these receptors will do?"

"Oh, I don't know, Pete! We're wasting time! Let me—"

"What happens if you leave one cylinder behind?"

She glanced down at the receptors scattered at her feet. "One would do as much damage as— But one is missing, Pete!"

"You left it on the road in the new forest. You can't get that back, so there's no point in running away with the rest, is there?"

Slowly she slid down out of his arms, falling against the railing of the ramp. He sat beside her, holding her trembling hands in his.

"I examined that receptor, Diane. It's nothing. It could have been dangerous, I suppose, to your conception of our society; but not to ours."

Quietly she began to cry. "I'm like a virus, Pete. They sent me to smash up your world; and now I'm helpless to prevent it. Of course that's why the Director ordered me to destroy my ship as soon as I landed—so I couldn't get away. We always thought that Magordo alone had preserved the culture of man. The others who survived the Suicide War were nothing but savages. We could return and wipe you out or enslave you with no more compunction than we feel toward our own Expendables."

"Expendables?"

"Our labor bands; the feeble-minded, the morons, the criminals. They take the place of machines on Magordo."

"What's a criminal?"

"A lawbreaker."

"But who could break a law? It's an independent statement of fact which is always true. If you could break it, you would have a new truth; the law would never have been valid. Why should you punish a man for—"

"You're talking about scientific law, Pete."

"Is there any other?"

"I meant disobedience. If one of us doesn't obey an order from the Director, if we're undisciplined—"

"Another man literally tells you what to do? Then how can any of you develop integrated personalities as individuals?"

She pulled her hand away and stood

up, frowning introspectively. "Maybe we don't, Pete; I never understood that before." She gestured toward the villages gleaming on the distant bayshore in the golden light of the rising sun. "How did it happen, Pete?"

"Our world, the way it is? Men can learn from old mistakes, you know. Not everyone was wiped out in the Suicide War. Most of the people in Africa and Australia survived; and there were probably ten million scattered throughout Asia, with another million here. But the planet was wrecked and we had to rebuild it or no one could have lived; and we had to work together to do it. Once we got the habit, it was easy. We've been working together ever since."

The light of the sun touched the field. As it did, the six receptors emitted a piercing, discordant scream, followed by throbbing drum beats. Hallen listened calmly. Diane held her hands over her ears, her eyes glazing with terror. After a time the din diminished and a resonant voice came from the grid.

"We are the invisible power, living unseen in the sky above. Bow down, you men of Earth, and worship us! Soon we shall come among you, and those who are true in their worship shall have nothing to fear. The rest we shall grind into dust with the fire of our wrath. Bow down, Earthmen, and worship us!"

The exhortation continued repetitively. Laughing, Hallen threw the cylinders far across the field, and greater distance made the voice relatively quiet.

"Imagine a voice like that speaking out of nowhere in a village of primitives," he said to Diane. "Highly effective—if the prognosis of your psychologists had happened to be right."

"But how could we have been mistaken?" Her voice was choked and stifled. "What happened in the beginning, Pete?"

"There's a charming legend in our children's books. On the day the old cities were smashed in the Suicide War, a young teacher—one of the few survivors—was walking dazed and half-mad through the rubble. He was carrying a book, the only whole thing he could find. He looked at the waste and he repeated over and over, 'Two and two make four;

two and two always make four. Didn't they know that?' Suddenly someone took his hand. She was a cook from one of the university living houses. 'Yassah, boss,' she said, 'it sure do. Only trouble is, you ain't never tol' us what four means.' He looked up at her and smiled. In spite of the flaming ruins, he felt confidence while he held her hand. 'Next time we will,' he said; 'next time we will.'"

After a silence, Diane asked, "And that's all?"

"That's all. He was a teacher of mathematics, and that's the way his mind worked—in terms of number logic. He and the woman became the leaders during the first generation afterward. They created the whole pattern of our civilization for us."

"What was the book he found, Pete?"

"'Utopia,' by Sir Thomas More, Moreville's named after him."

"I've read it; we have it on microfilm in Magordo." Abruptly she drew her pistol and plunged awkwardly to the top of the rocket ramp. She stood panting at the open port. "Stay where you are, Pete. I know what I'm doing."

"But you don't need to run away, Diane! You saw what happened. The cylinders are harmless."

"But I'm not. I'm the virus of the past. If any of us comes home, we'll bring the old ideas with us."

"And are we so instable that it would overthrow us?"

"All of you, no; a few, yes. In time, that few would multiply into a multitude."

He moved tentatively up the ramp, but she leveled her pistol deliberately.

"I'm going back to Magordo, Pete. I'll make sure none of us ever tries to come home again. In two or three generations, it won't matter. We'll all be feeble-minded Expendables by that time, and as harmless as a cage full of apes."

"Diane, you're thinking with your emotions, not your mind. You're men in Magordo, just as we are. You belong here."

"We're deserters; we ran away when the going got tough."

"All that's over and forgotten. Your people reacted normally in terms of the thinking of their day."

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"Answer a question for me, Pete; answer it honestly! Would you have been different if the mathematics teacher had found a different kind of book? Something by Clausewitz, for instance?"

"Conceivably, but the book wasn't everything. It's men that made our world, Diane, not words."

"We're something worse than a book, Pete. We're a virus, a contagion." She gestured toward her gun. "Like this; a weapon is the symbol of our ways."

"You can learn ours, Diane. Do you think we're unarmed because we don't know the techniques? We use all sorts of weapons when we vacation in the hunting preserves; most of us are expert marksmen. And if your virus could change us, why am I unarmed now? I knew you had a gun. Why didn't I bring one of my own, to defend myself? We simply don't live on that emotional level of action, Diane! Can't you see it? We solve our problems differently."

For a moment she hesitated; her pistol wavered. Then her shoulders stiffened and she plunged into the rocket. Before he could follow her, the port slid shut and he was forced to leap back to avoid the backwash of flame from the rocket tubes.

He looked up a moment later and watched the thin line of black dart across the face of the rising sun. To the end, she had retained her own internal integrity, true to the ancient confusion of emotion and logic which had once wrecked the world.

He knew that if he acted quickly enough, he could use the spacefield monitors to trace the rocket and locate her destination among the stars. Instead, he turned away deliberately. Diane had sacrificed herself to an idea that seemed entirely valid to her; he had no moral right to intervene by force, if the persuasion of his argument had failed.

And he realized, suddenly, that the future could survive only when the past was dead. Hallen's world and Diane's were mutual contradictions; neither could compromise or communicate with the other.

He waved toward the morning sky in solemn salute, feeling somehow proud

of Diane's transparent childishness, her foolish and unnecessary courage. But chiefly he was proud of her consistency of self. His world had no reason to be ashamed of hers, which had germinated it.

MISSION OF GRAVITY

(Continued from page 47)

The chief brought up against the outer rafts at the point where the radio had been loaded, and immediately disembarked. Barlennan had given his orders as soon as the canoe had left the bank, and now another set of slings went about the bow and stern of the little vessel. It was hauled aboard and dragged to the space reserved for it, still with every evidence of respect. The chief did not wait for this operation to be finished; he embarked on the other canoe and returned to shore, looking back from time to time. Darkness swallowed up the scene as he climbed the bank.

"You win, Barl. I wish I had some of your ability; I'd be a good deal richer than I am now, if I were still alive by some odd chance. Are you going to wait around to get more out of them tomorrow?"

"We are leaving now!" the captain replied without hesitation. "I want to get where I can learn about this little ship without having to play-act all the time I'm about it. We'll be out in the current in two minutes."

Sounds of scraping wood as the *Bree* was poled from her cage confirmed his statement; and moments later the sound was replaced with utter silence as the ship slipped free into the slow stream. There was a little wind, and some sails were hoisted until they reached a point well out in the river; then they were dropped once more, and the banks began to slip silently westward as the current took over. Lackland left his dark screen and went to his quarters for his first sleep in many hours. Sixty-five minutes—rather less than four of Mesklin's days—had passed since the village was sighted.

(To be continued)